iPhone Developer Program

Standard Program Portal User Guide for OS X iPhone 2.0

Welcome 3

Getting Started

Development 4

Setting up your iPhone Development Team (if applicable)

Obtaining your iPhone Development Certificate

Assigning Apple Devices to your Team

Installing OS X iPhone

Creating your App ID

Creating and Downloading Development Provisioning Profiles

Running your Development Application on a Provisioned Device

Distribution 24

Preparing your Application for Distribution

Submitting your application via iTunes Connect

Distributing your application with Ad Hoc Distribution

Glossary 50

Welcome

Getting Started

Welcome to the iPhone Developer Program, your destination for all the resources you need to develop, test and distribute your OS X iPhone applications. The iPhone Dev Center and Program Portal are designed to walk you through each step necessary to get your application from code to customer.

In order to install and test your application on an Apple device, you'll need to complete the following tasks in the Program Portal:

- Set up your Development Team (for those enrolled as a Company)
- Designate Apple Devices for your Development Team
- Request and Authorize iPhone Development Certificates
- Create a unique App ID for your Application
- Create and Download a Development Provisioning Profile

When you are ready to distribute your application, your Team Agent will need to complete the following additional tasks in the Portal:

- Create and Download an iPhone Distribution Certificate
- Create and Download a Distribution Provisioning Profile
- Build your application with Xcode
- Submit your application for Distribution

The user guide contains detailed information regarding each of the above steps.

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Development

The following topics will inform you about the required steps for installing your code on an Apple device (iPhone or iPod touch) for development and debugging purposes.

Setting up your iPhone Development Team (if applicable)

If you have enrolled your company in the iPhone Developer Program, you first need to set up your iPhone Development Team in the 'Team' section of the Program Portal.

If you have enrolled as an Individual in the iPhone Developer Program, you are designated the Team Agent and therefore have access to all Program Portal capabilities. You can not add any additional team members.

Team Member Roles and Responsibilities

A development team consists of individuals with the following roles:

- Team Agent
  The Team Agent (the original enrollee accepted into the iPhone Developer Program) can invite Team Admins and Team Members, approve digital certificate requests, enter devices into the Program Portal, create App IDs, obtain an iPhone Distribution Certificate, and create Development and Distribution Provisioning Profiles. The Team Agent is the primary contact for the Development Team and is responsible for accepting all iPhone Developer Program agreements.
- Team Admin
  Team Admins can invite new Team Admins and Team Members, approve digital certificate requests, enter devices into the Program Portal, and create Development Provisioning Profiles. All teams with multiple members require a minimum of two Team Admins (including the Team Agent). There is no maximum for the number of Team Admins that can be on a team with multiple members.
- Team Member
  Team Members can request digital certificates and download Development Provisioning Profiles. All three types of members have the ability to test applications on Apple devices.

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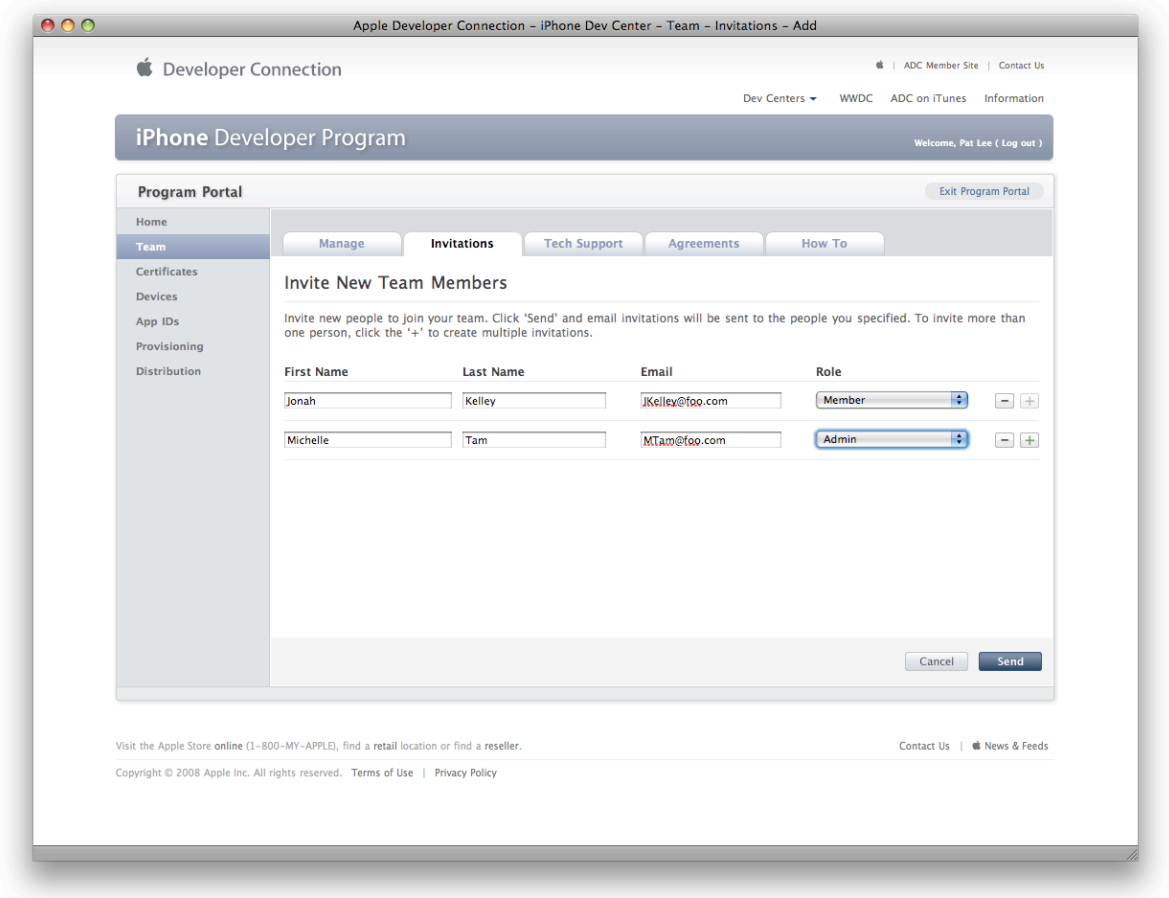
Adding Team Admins and Team Members

Team Agents and Team Admins can add new Team Members, who can have either an Admin or Member role, by navigating to the 'Invitations' tab in the 'Team' section of the Program Portal. Click 'Add' to invite new people to join your team. After hitting 'Send', the Program Portal will generate and deliver an email to the invitee. Team Admins will be notified via a separate email when an invitation has been accepted.



If you need to designate a new Team Agent, please contact the ADC Support Team.

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Obtaining your iPhone Development Certificate

In the 'Certificates' section of the iPhone Developer Program Portal, you can request individual iPhone Development Certificates. All iPhone applications must be signed by a valid certificate before they can be run on an Apple device. In order to sign applications for testing purposes, Team Members need an iPhone Development Certificate.

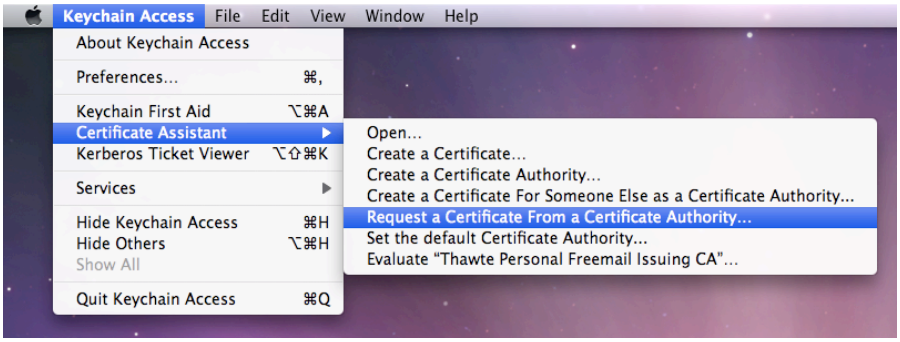
A digital identity is an electronic means of identification consisting of a secret "private key" and a shared "public key". This private key allows Xcode to sign your OS X iPhone application binary.

The digital certificates you request and download are electronic documents that associate your digital identity with other information, including your name, email address, or business. An iPhone Development Certificate is restricted to application development only and is valid for a limited amount of time. The Apple Certification Authority can also invalidate ("revoke") a certificate before it expires.

Generating a Certificate Signing Request

To request an iPhone Development Certificate, you first need to generate a Certificate Signing Request (CSR) utilizing the Keychain Access application in Mac OS X Leopard. The creation of a CSR will prompt Keychain Access to simultaneously generate your public and private key pair establishing your iPhone Developer identity. Your private key is stored in the login Keychain by default and can be viewed in the Keychain Access application under the 'Keys' category. To generate a CSR:

1. In your Applications folder, open the Utilities folder and launch Keychain Access.
2. Choose Keychain Access -> Certificate Assistant -> Request a Certificate from a Certificate Authority. Note: If you have a private key highlighted in the Keychain during this process, the resulting Certificate Request will not be accepted by the Program Portal. Confirm that you are selecting "Request a Certificate From a Certificate Authority..." and not selecting "Request a Certificate From a Certificate Authority with <Private Key>..."



3. In the User Email Address field, enter your email address. Please ensure that the email address entered matches the information that was submitted when you registered as an iPhone Developer.
4. In the Common Name field enter your name. Please ensure that the name entered matches the information that was submitted when you registered as an iPhone Developer.
5. No CA (Certificate Authority) Email Address is required. The 'Required' message will be removed after completing the following step.

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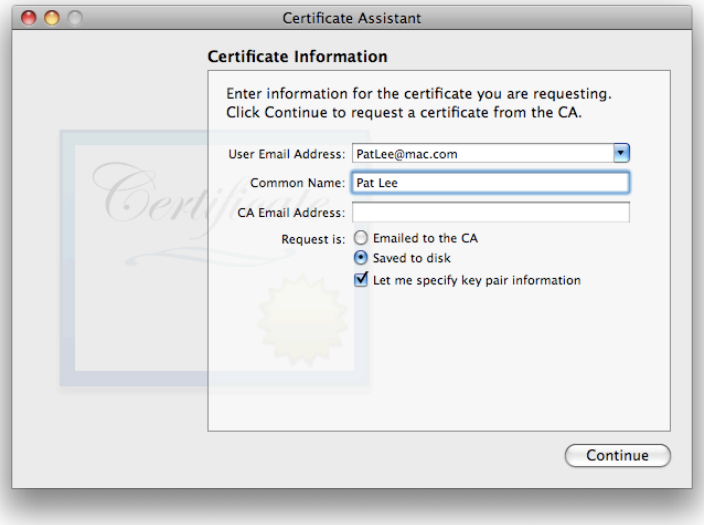
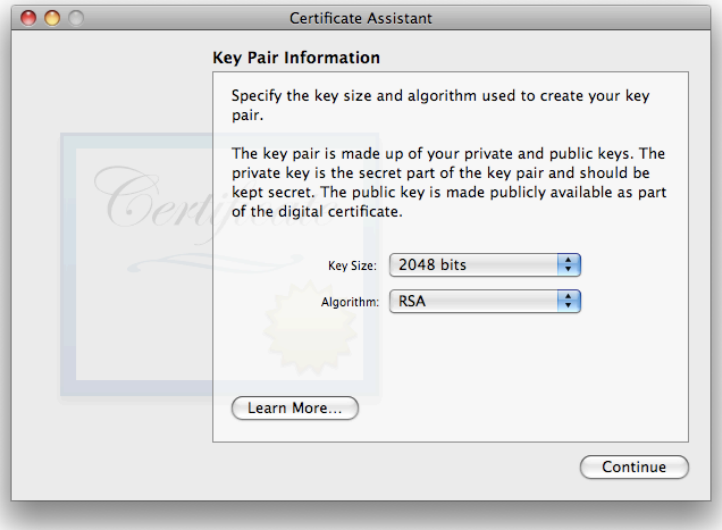
6. Select the 'Saved to Disk' radio button and if prompted, select 'Let me specify key pair information' and click 'Continue'.


Certificate Assistant
Certificate Information
Enter information for the certificate you are requesting.
Click Continue to request a certificate from the CA.
User Email Address: PatLee@mac.com
Common Name: Pat Lee
CA Email Address:
Request is: Emailed to the CA
Saved to disk
Let me specify key pair information
Continue

7. If 'Let me specify key pair' was selected, specify a file name and click 'Save'. In the following screen select '2048 bits' for the Key Size and 'RSA' for the Algorithm. Click 'Continue'.


Certificate Assistant
Key Pair Information
Specify the key size and algorithm used to create your key pair.
The key pair is made up of your private and public keys. The private key is the secret part of the key pair and should be kept secret. The public key is made publicly available as part of the digital certificate.
Key Size: 2048 bits
Algorithm: RSA
Learn More...
Continue

8. The Certificate Assistant will create a CSR file on your desktop

Submitting a Certificate Signing Request for Approval

1. After creating a CSR, log in to the iPhone Developer Program Portal and navigate to 'Certificates' -> 'Development' and click 'Add Certificate'.
2. On your local system, open the saved CSR file using a text editor and copy the entire contents, including the "BEGIN" and "END" tags.
3. Paste the entire contents of the CSR into the blank text field and click 'Submit'. Note: If the Key Size was not set to 2048 bits during the CSR creation process, the Portal will reject the CSR.
4. Upon submission, Team Admins will be notified via email of the certificate request.
5. Once your CSR is approved or rejected by a Team Admin, you will be notified via email of the change in your certificate status.

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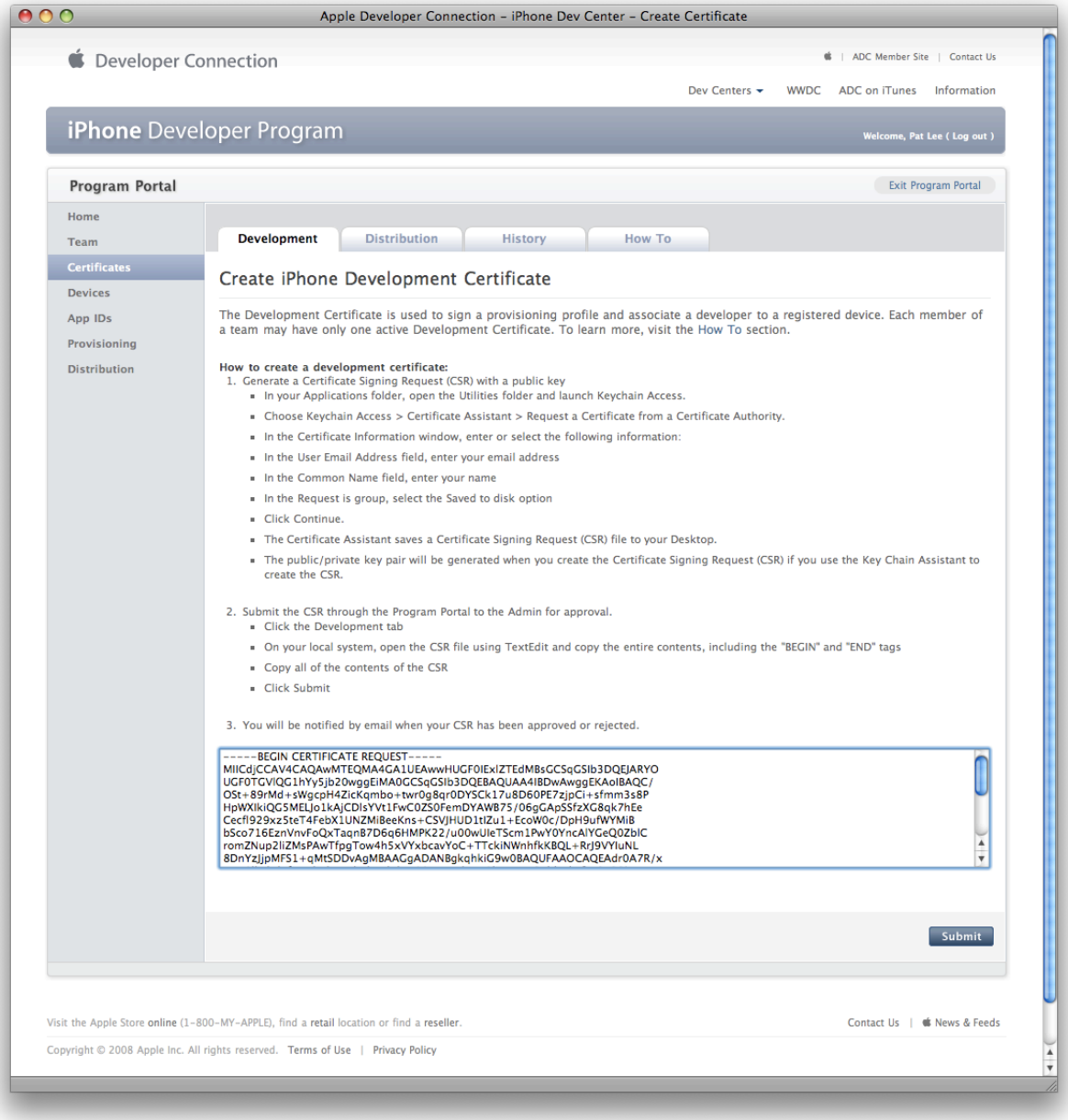
Apple Developer Connection – iPhone Dev Center – Create Certificate
Developer Connection
ADC Member Site | Contact Us
Dev Centers
WWDC
ADC on iTunes
Information
iPhone Developer Program
Welcome, Pat Lee (Log out)
Program Portal
Exit Program Portal
Home
Team
Certificates
Devices
App IDs
Provisioning
Distribution
Development
Distribution
History
How To
Create iPhone Development Certificate
The Development Certificate is used to sign a provisioning profile and associate a developer to a registered device. Each member of a team may have only one active Development Certificate. To learn more, visit the How To section.
How to create a development certificate:
1. Generate a Certificate Signing Request (CSR) with a public key
In your Applications folder, open the Utilities folder and launch Keychain Access.
Choose Keychain Access > Certificate Assistant > Request a Certificate from a Certificate Authority.
In the Certificate Information window, enter or select the following information:
In the User Email Address field, enter your email address
In the Common Name field, enter your name
In the Request is group, select the Saved to disk option
Click Continue.
The Certificate Assistant saves a Certificate Signing Request (CSR) file to your Desktop.
The public/private key pair will be generated when you create the Certificate Signing Request (CSR) if you use the Key Chain Assistant to create the CSR.
2. Submit the CSR through the Program Portal to the Admin for approval.
Click the Development tab
On your local system, open the CSR file using TextEdit and copy the entire contents, including the "BEGIN" and "END" tags
Copy all of the contents of the CSR
Click Submit
3. You will be notified by email when your CSR has been approved or rejected.
-----BEGIN CERTIFICATE REQUEST-----
MIICdjCCAV4CAQAwMTEQMA4GA1UEAwwHUGF0IExlZTEdMBsGCSqGSIb3DQEJARYO
UGF0TGVlQG1hYy5jb20wggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC/
OSt+89rMd+sWgcpH4ZicKqmbo+twr0g8qr0DYSCk17u8D60PE7zjpCi+sfmm3s8P
HpWXIkiQG5MELJo1kAjCDIsYVt1FwC0ZS0FemDYAWB75/06gGApSSfzXG8qk7hEe
Cecfl929xz5teT4FebX1UNZMiBeeKns+CSVJHUD1tlZu1+EcoW0c/DpH9ufWYMiB
bSco716EznVnvFoQxTaqnB7D6q6HMPK22/u00wUleTScm1PwY0YncAlYGeQ0ZblC
romZNup2liZMsPAwTfpgTow4h5xVYxbcavYoC+TTckiNWnhfkKBQL+RrJ9VYluNL
8DnYzJjpMFS1+qMtSDDvAgMBAAGgADANBgkqhkiG9w0BAQUFAAOCAQEAdr0A7R/x
Submit
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Approving Certificate Signing Requests

Team Agents and Team Admins have the authority and responsibility to approve or reject all iPhone Development Certificate requests. In order to approve/reject Team Members' requests, all Team Admins should first submit their own CSR for approval.

1. After submitting a CSR for approval, Team Admins will be directed to the 'Development' tab of the 'Certificates' section. Here, CSRs can be approved or rejected by clicking the corresponding action next to each request.
2. Once a CSR is approved or rejected, the requesting Team Member is notified via email of the change in their certificate status. Each iPhone Development Certificate is available to both the Team Member who submitted the CSR for approval and to the Team Admin(s).

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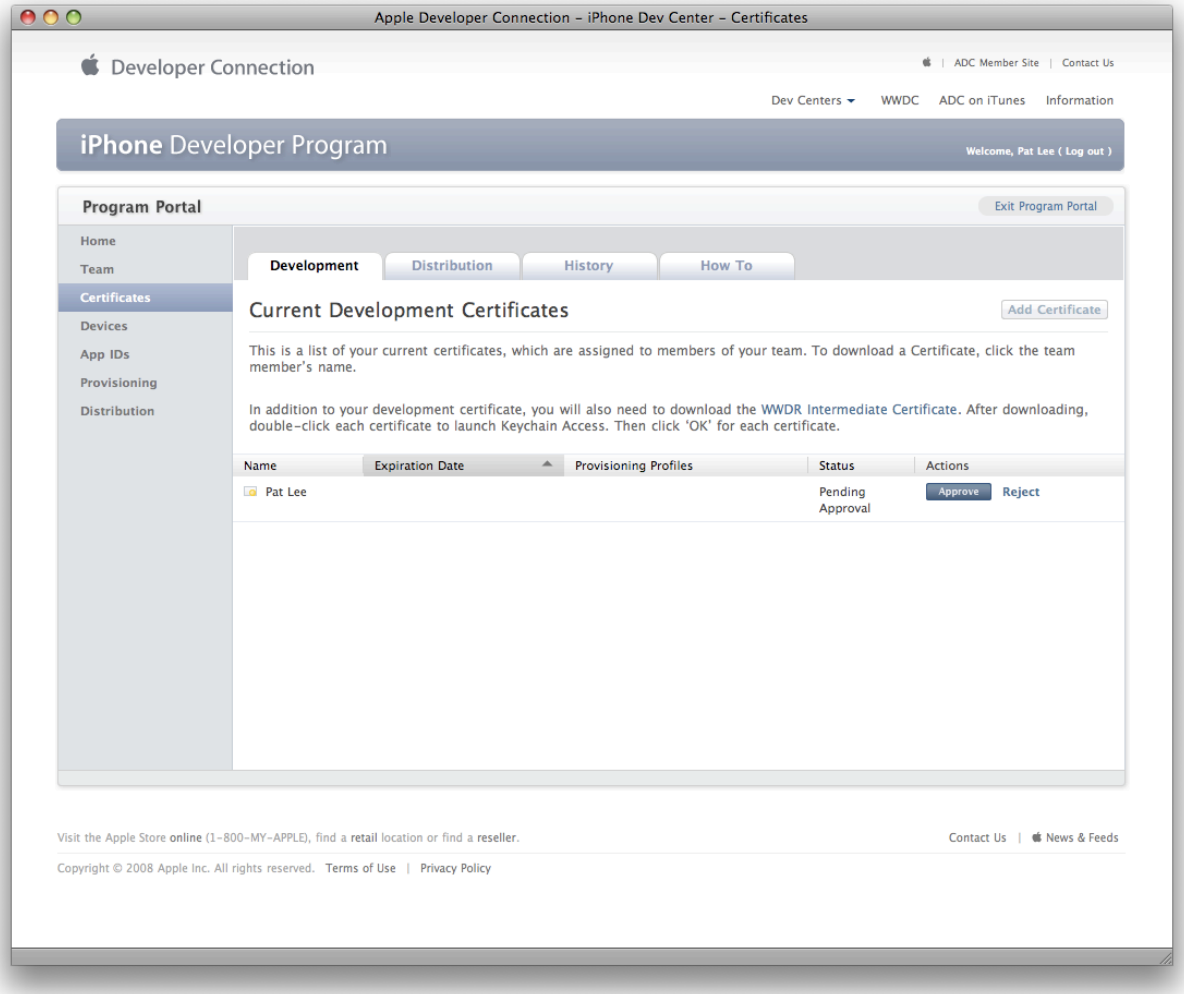
Apple Developer Connection – iPhone Dev Center – Certificates
Developer Connection
ADC Member Site | Contact Us
Dev Centers
WWDC
ADC on iTunes
Information
iPhone Developer Program
Welcome, Pat Lee (Log out)
Program Portal
Exit Program Portal
Home
Team
Certificates
Devices
App IDs
Provisioning
Distribution
Development
Distribution
History
How To
Current Development Certificates
Add Certificate
This is a list of your current certificates, which are assigned to members of your team. To download a Certificate, click the team member's name.
In addition to your development certificate, you will also need to download the WWDR Intermediate Certificate. After downloading, double-click each certificate to launch Keychain Access. Then click 'OK' for each certificate.
Name
Expiration Date
Provisioning Profiles
Status
Actions
Pat Lee
Pending Approval
Approve
Reject
Visit the Apple Store online (1-800-MY-APPLE), find a retail location or find a reseller.
Contact Us | News & Feeds
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Downloading and Installing Development Certificates

1. In the 'Certificates'-->'Distribution' section of the Portal, control-click the WWDR Intermediate Certificate link and select "Saved Linked File to Downloads" to initiate download of the certificate.
2. On your local machine, double-click the WWDR Intermediate certificate to launch Keychain Access and install.
3. Upon CSR approval, Team Members and Team Admins can download their certificates via the 'Certificates' section of the Program Portal. Click 'Download' next to the certificate name to download your iPhone Development Certificate to your local machine.
4. On your local machine, double-click the downloaded .cer file to launch Keychain Access and install your certificate.
5. Team Members can only download their own iPhone Development Certificates. Team Admins have the authority to download the public certificates of all of their Team Members. Apple never receives the private key for a CSR. The private keys are not available to anyone except the original key pair creator and are stored in the system keychain of that Team Member.

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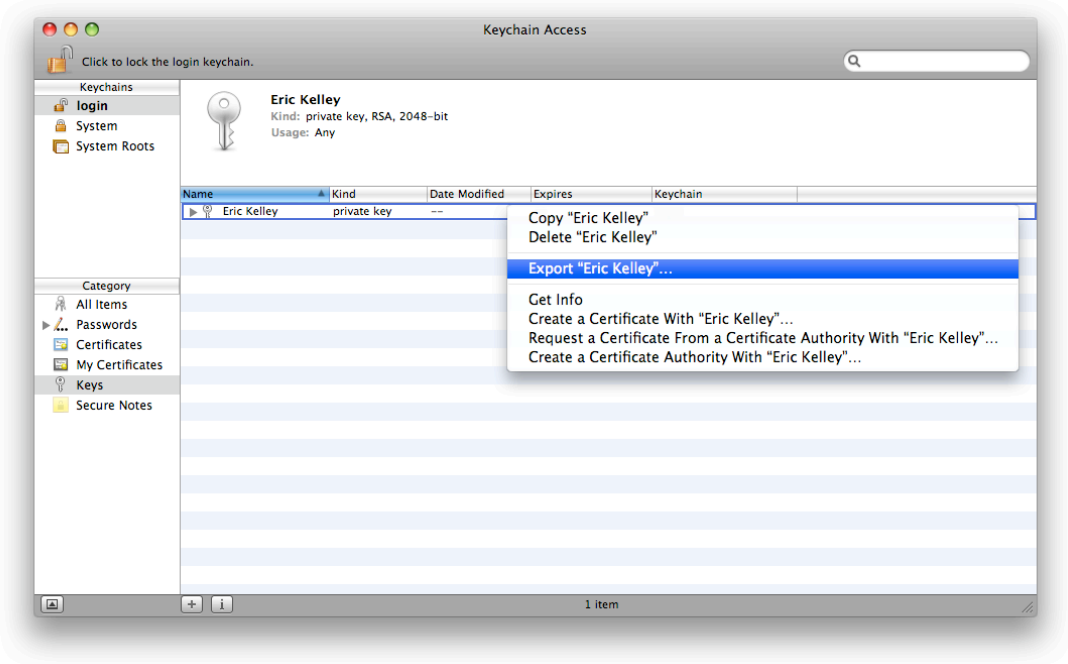
Saving your Private Key and Transferring to other Systems

It is critical that you save your private key somewhere safe in the event that you need to develop on multiple computers or decide to reinstall your system OS. Without your private key, you will be unable to sign binaries in Xcode and test your application on any Apple device. When a CSR is generated, the Keychain Access application creates a private key on your login keychain. This private key is tied to your user account and cannot be reproduced if lost due to an OS reinstall. If you plan to do development and testing work on multiple systems, you will need to import your private key onto all of the systems you'll be doing work on.

1. To export your private key and certificate for safe-keeping and for enabling development on multiple systems, open up the Keychain Access Application and select the 'Keys' category.
2. Control–Click on the private key associated with your iPhone Development Certificate and click 'Export Items' in the menu. The private key is identified by the iPhone Developer: <First Name> <Last Name> public certificate that is paired with it.
3. Save your key in the Personal Information Exchange (.p12) file format.
4. You will be prompted to create a password which is used when you attempt to import this key on another computer.
5. You can now transfer this .p12 file between systems. Double-click on the .p12 to install it on a system. You will be prompted for the password you entered in Step 4.



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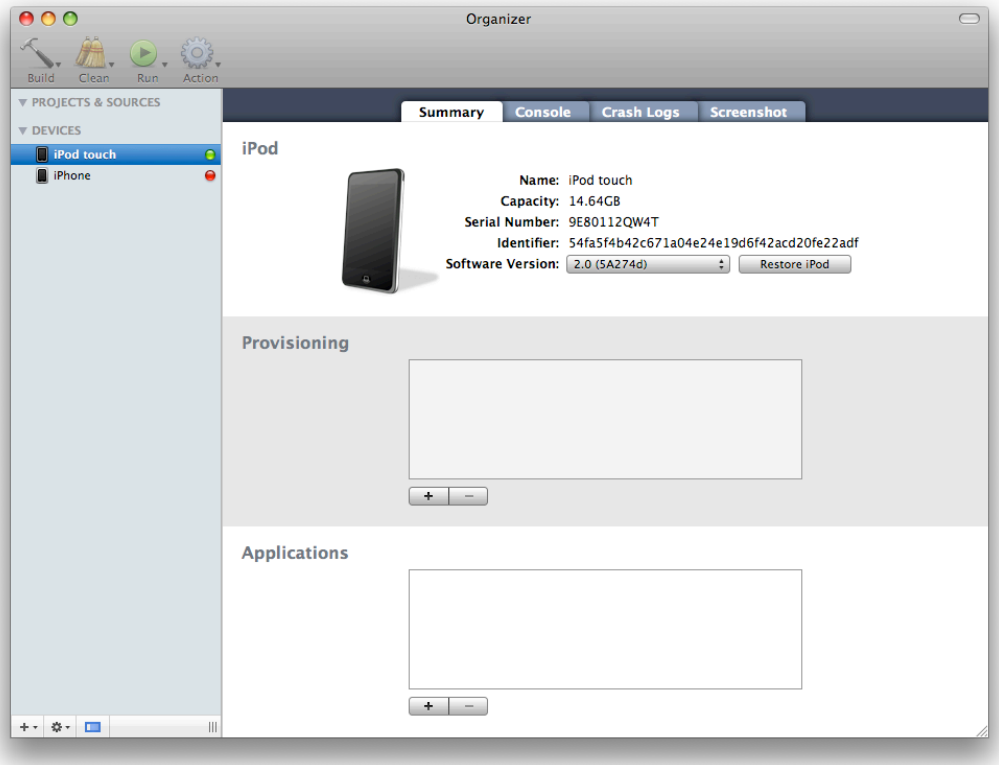
Assigning Apple Devices to your Team

In order to debug your OS X iPhone application on an Apple device, a Team Agent or Team Admin must first enter the Unique Device Identifier (UDID) for each iPhone and iPod touch into the Program Portal. The UDID is a 40 hex character string that is tied to a single device, similar to a serial number. These UDIDs are included in the provisioning profiles created later. You can input up to 100 devices on your development team.

Locating a Unique Device ID with Xcode

To find out your device's UDID, simply connect your device to your Mac and open Xcode. In Xcode, navigate to the 'Window' drop down menu and select 'Organizer'. The 40 hex character string in the Identifier field is your device's UDID. Team Members should send this string to their Team Admins for input into the Program Portal.



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Locating a Unique Device ID with iTunes 7.7

Alternatively, you can also find out your device's UDID using iTunes 7.7. or later. To do this, connect your device to your Mac and launch iTunes. In iTunes, select your device in the 'Devices' section and navigate to the Summary tab. Click on the Serial Number label to reveal the Identifier field and the 40 character UDID.

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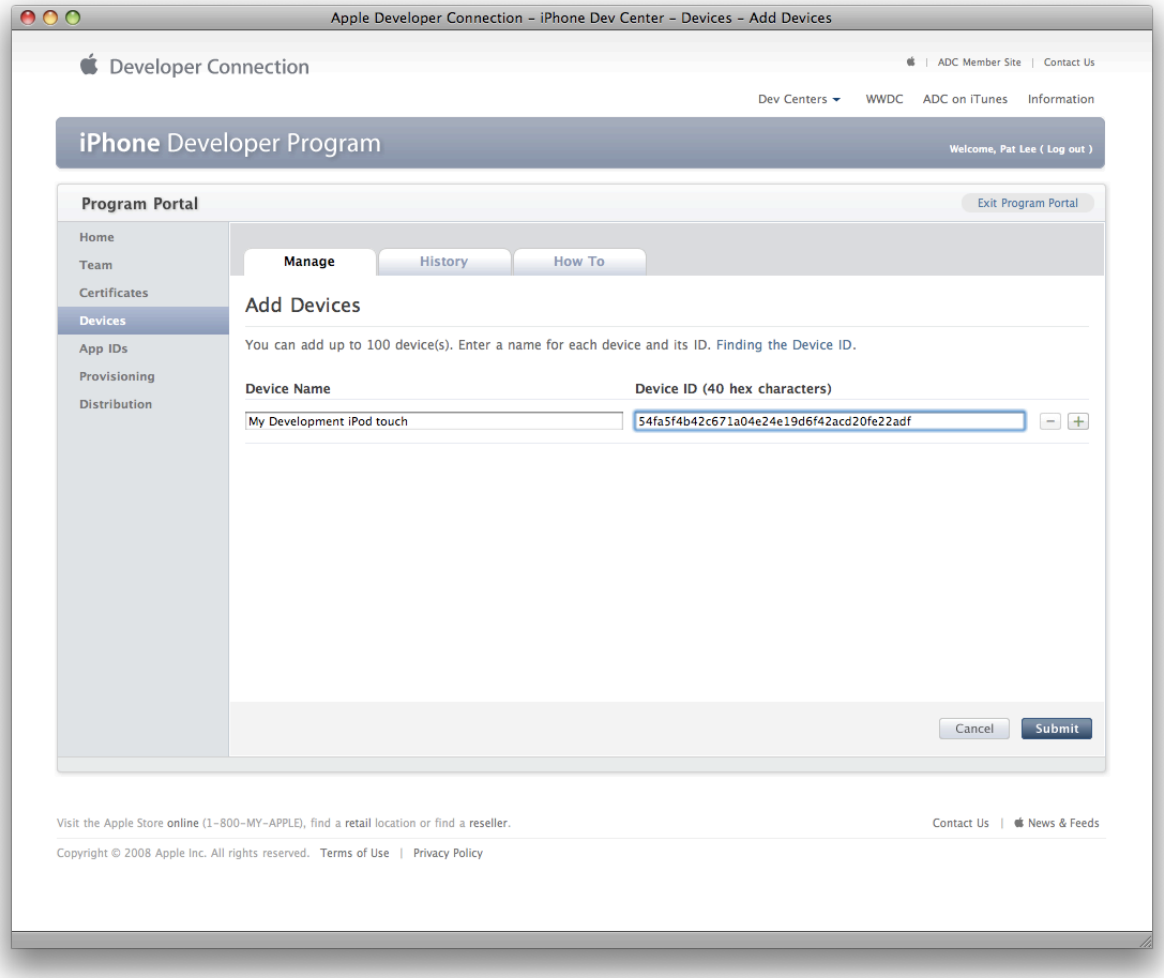
Adding Devices

Upon receiving a UDID, Team Admins should navigate to the 'Devices' section of the Program Portal and click 'Add'. Admins will enter a Device Name as well as the UDID and click 'Submit'.



Removing Devices from your Development Team

To remove a device from your development team, navigate to the 'Devices' area of the Program Portal and click the 'Remove' link to the right of the desired device. Removing a device from your development team will invalidate provisioning profiles containing that device. Affected provisioning profiles will need to be modified in order be downloaded again.

Editing Devices on your Development Team

To edit a device on your development team, navigate to the 'Devices' area of the Program Portal and click the 'Modify' link to the right of the desired device. You may change the device name without affecting any existing provisioning profile(s) associated with the device. However, if you change the device ID, you will invalidate any existing provisioning profile(s) associated with the device. Affected provisioning profiles will need to be modified in order be downloaded again

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Installing OS X iPhone

To run your code on an Apple device, you will need to install OS X iPhone onto each development device and "restore" each device to a development state. Note: Once a pre-release version of OS X iPhone is installed on the device you cannot restore the device to an earlier version of OS X iPhone. The device may only be used for development and testing purposes until that version of OS X iPhone is publicly released. Please DO NOT install the iPhone OS before registering device UDIDs, as installation on non-registered devices will render them inoperable.

1. Download the OS X iPhone Disk Image (.dmg) from the iPhone Dev Center for the Apple device you are using.
2. Connect your device to your Mac, close iTunes and launch Xcode.
3. Once the device is detected by Xcode, select 'Use for Development' when prompted.

4. In Xcode, Navigate to 'Window'->'Organizer'. There you should see your device and current software version.
5. In the 'Software Version' drop-down menu, select 'Other Version' and navigate in Finder to the OS X iPhone 2.0 .ipsw file downloaded from the iPhone Dev Center. Click 'Restore iPod'.

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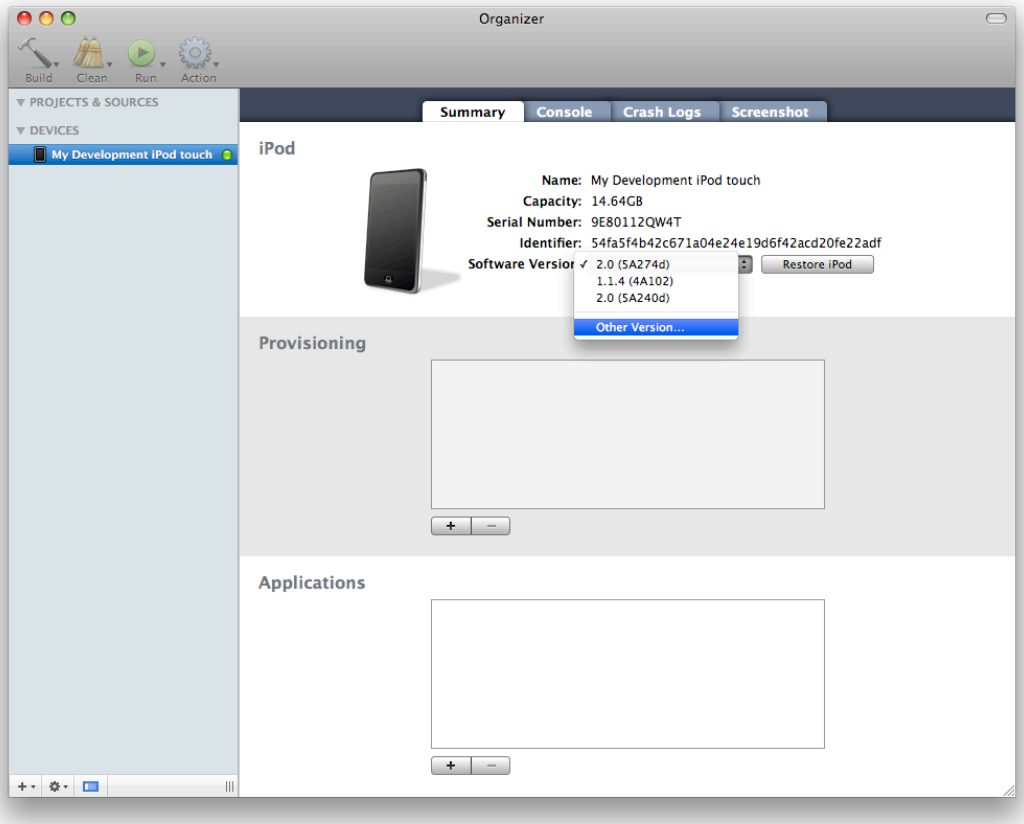

6. In Xcode, the restore proceeds. This process should NOT be interrupted; it will take approximately 5 minutes. Close any prompts that iTunes may present during the restore process.

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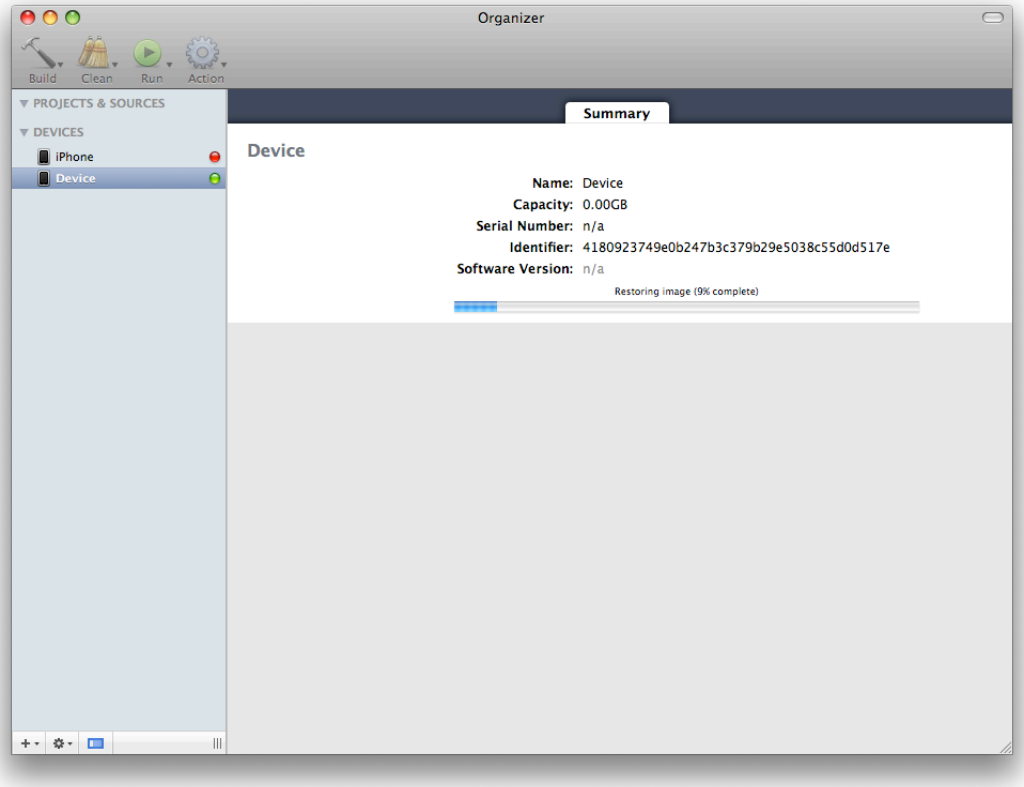
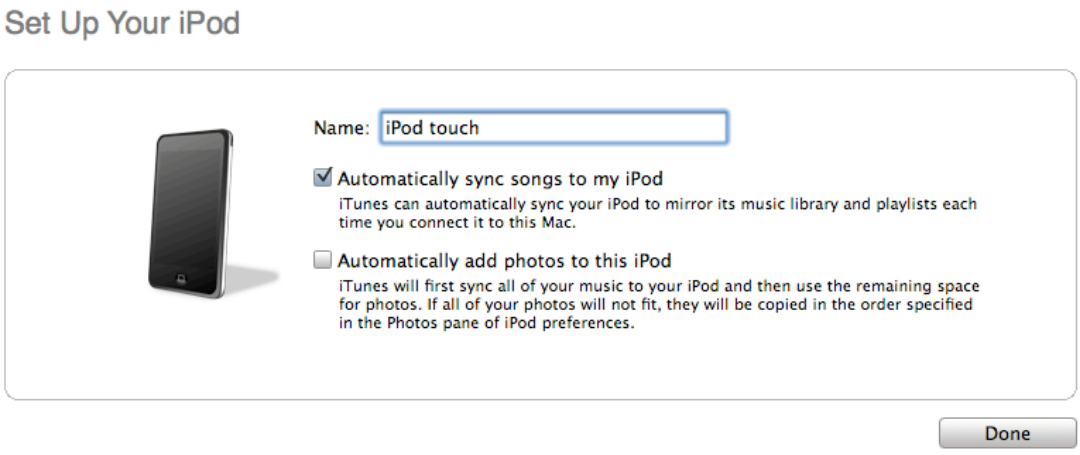


7. After the device reboots, Xcode again displays the 'New Device Detected' dialog. Click 'Use for Development'.
8. To complete the OS X iPhone installation, launch iTunes and set up the device.


Set Up Your iPod
Name: iPod touch
Automatically sync songs to my iPod
iTunes can automatically sync your iPod to mirror its music library and playlists each time you connect it to this Mac.
Automatically add photos to this iPod
iTunes will first sync all of your music to your iPod and then use the remaining space for photos. If all of your photos will not fit, they will be copied in the order specified in the Photos pane of iPod preferences.
Done

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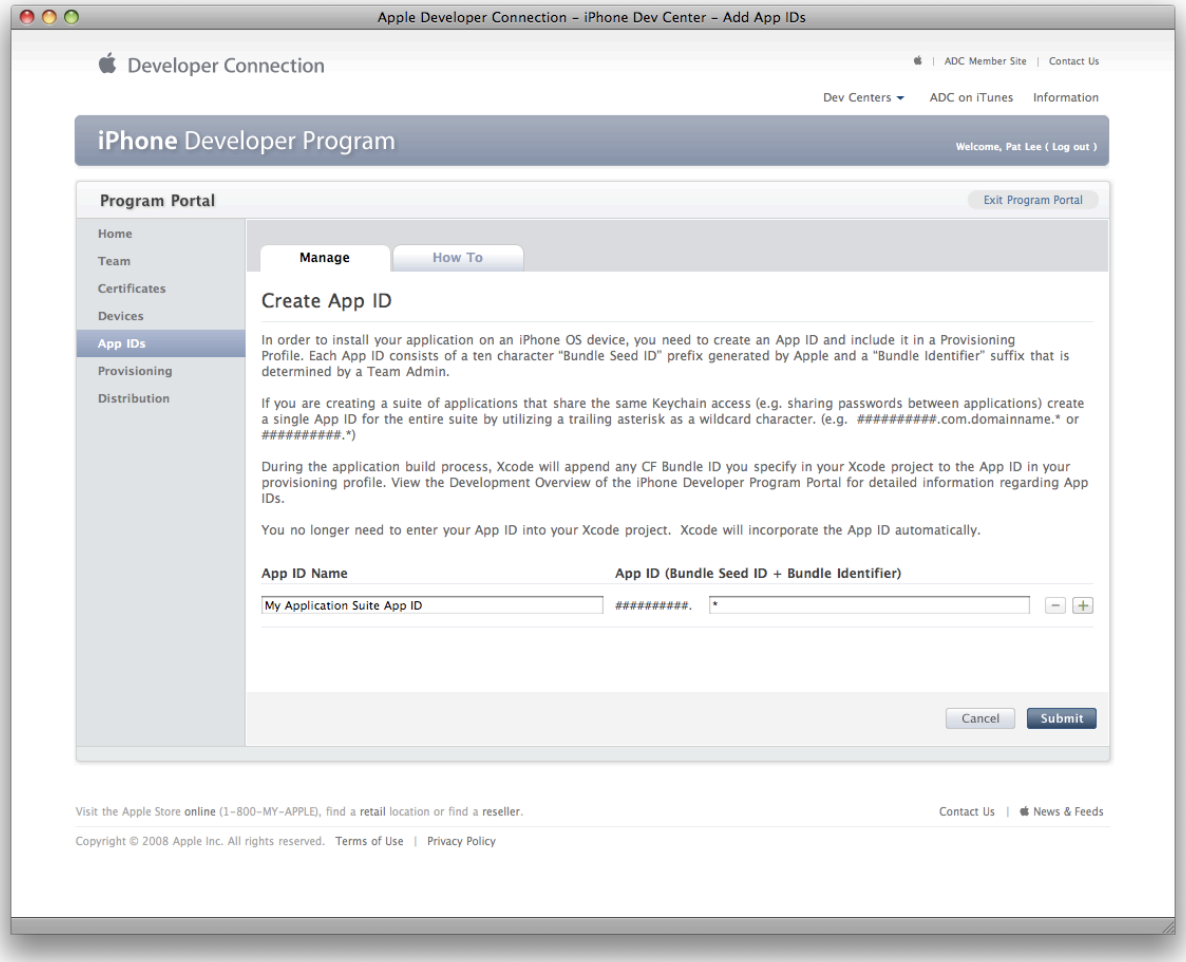
Creating your App ID

An App ID is a unique digital fingerprint that OS X iPhone uses to grant your application access to a portion of the Keychain and is one part of your Development and Distribution Provisioning Profiles. In order to install your application on an OS X iPhone based device, you will need to create an App ID.

Each App ID consists of a universally unique 10 character "Bundle Seed ID" prefix generated by Apple and a "Bundle Identifier" suffix that is determined by a Team Admin. If you plan to develop and distribute more than one application, the Bundle Identifier needs to be an asterisk at this time.

Generating an App ID

1. Team Agents or Team Admins should navigate to the 'App ID' section of the Program Portal.
2. Click 'Add ID'.
3. Enter a common name for your App ID. This is a name for easy reference and identification within the Program Portal.
4. Enter an asterisk (*) character in the Bundle Identifier free-form text field to create your wildcard App ID to be used for all of your applications.
5. Click 'Submit'. At this time, the 10 character Bundle Seed ID is generated and concatenated with the Bundle Identifier you entered. This resulting string is your App ID.


Apple Developer Connection – iPhone Dev Center – Add App IDs
Developer Connection
ADC Member Site | Contact Us
Dev Centers
ADC on iTunes
Information
iPhone Developer Program
Welcome, Pat Lee (Log out)
Program Portal
Exit Program Portal
Home
Team
Certificates
Devices
App IDs
Provisioning
Distribution
Manage
How To
Create App ID
In order to install your application on an iPhone OS device, you need to create an App ID and include it in a Provisioning Profile. Each App ID consists of a ten character "Bundle Seed ID" prefix generated by Apple and a "Bundle Identifier" suffix that is determined by a Team Admin.
If you are creating a suite of applications that share the same Keychain access (e.g. sharing passwords between applications) create a single App ID for the entire suite by utilizing a trailing asterisk as a wildcard character. (e.g. ##########.com.domainname.* or ##########.*)
During the application build process, Xcode will append any CF Bundle ID you specify in your Xcode project to the App ID in your provisioning profile. View the Development Overview of the iPhone Developer Program Portal for detailed information regarding App IDs.
You no longer need to enter your App ID into your Xcode project. Xcode will incorporate the App ID automatically.
App ID Name
App ID (Bundle Seed ID + Bundle Identifier)
My Application Suite App ID
##########.
*
Cancel
Submit
Visit the Apple Store online (1-800-MY-APPLE), find a retail location or find a reseller.
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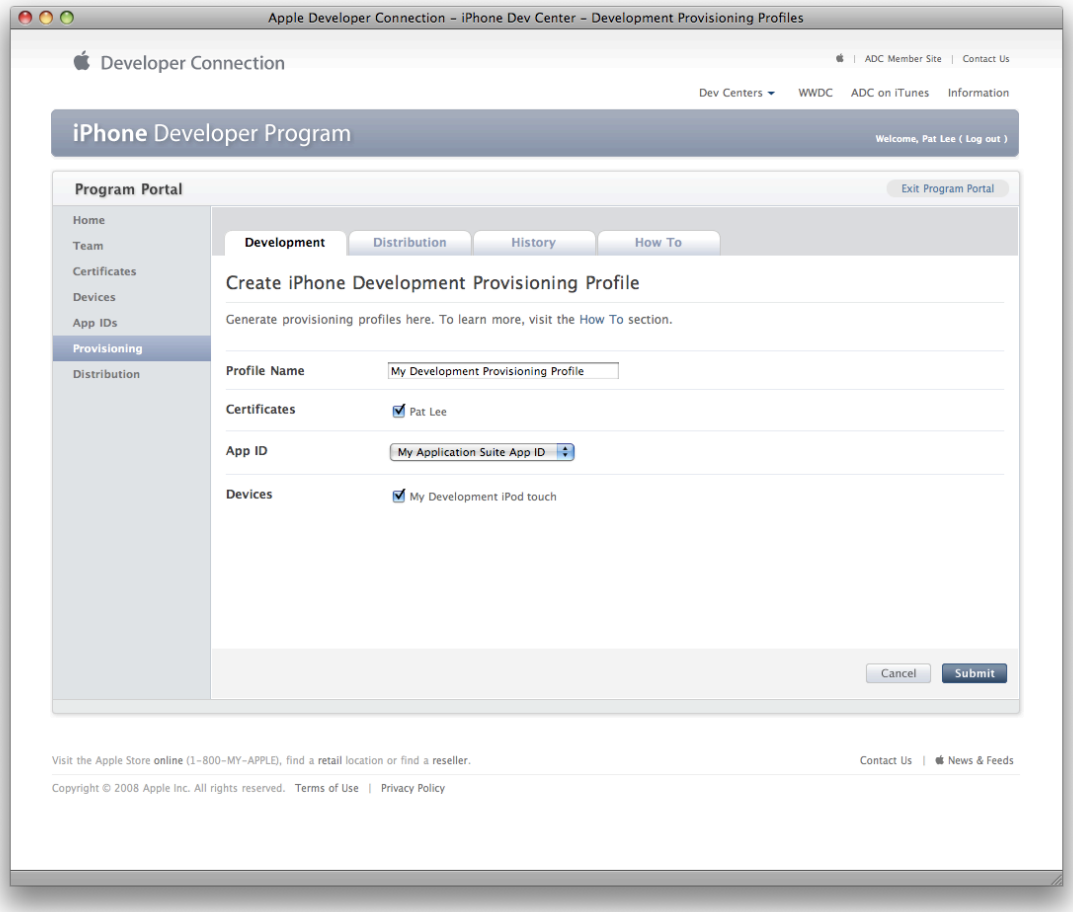
Creating and Downloading Development Provisioning Profiles

A Provisioning Profile is a collection of digital entities that uniquely ties developers and devices to an authorized iPhone Development Team and enables a device to be used for testing. A Development Provisioning Profile must be installed on each device on which you wish to run your application code. Each Development Provisioning Profile will contain a set of iPhone Development Certificates, Unique Device Identifiers and an App ID.

Devices specified within the provisioning profile can be used for testing only by those individuals whose iPhone Development Certificates are included in the profile. A single device can contain multiple provisioning profiles.

Creating a Development Provisioning Profile

1. In the 'Provisioning' section of the Portal, Team Admins should click 'Add' on the Development tab.
2. Enter a name for the provisioning profile.
3. Specify which devices will be associated with the provisioning profile. You must specify a device in order for that device to utilize the provisioning profile. You can install a provisioning profile on any of your devices, however, if a device's UDID is not included in the provisioning profile, the device cannot run that profile.
4. Specify which iPhone Development Certificates will be associated with the provisioning profile. You must specify an iPhone Development Certificate in order for the application code signed with that same certificate to run on the device.
5. Specify a single App ID for the Development Provisioning Profile. Each Development Provisioning Profile can specify only ONE App ID. Use the App ID containing the wildcard asterisk character to build all of your applications.



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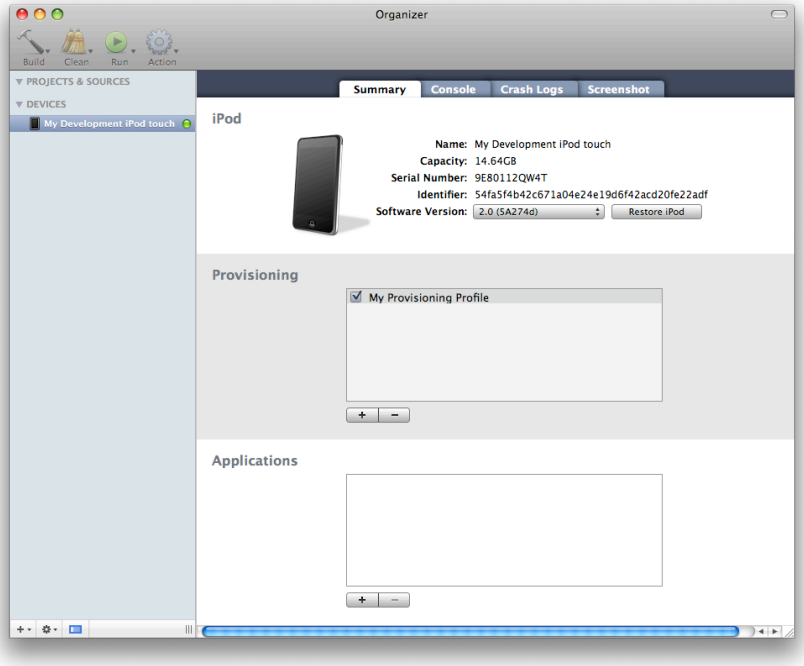
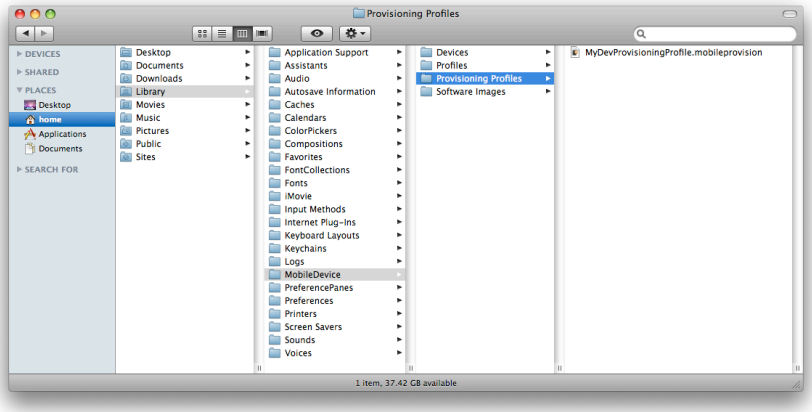
Installing a Development Provisioning Profile

All Team Agents, Admins and Members can download a Development Provisioning Profile from the 'Provisioning' section of the Portal after it has been created. *Only those developers whose Apple device IDs and iPhone Development Certificates are included in the provisioning profile will be able to install and test applications on their device.*

1. In the 'Provisioning' section of the Program Portal, click the download button next to the desired provisioning profile.
2. Drag the downloaded file into the 'Organizer' window within Xcode or onto the Xcode application icon in the dock. This will automatically install the .mobileprovision file and create the proper directory. Alternatively, you can drag the .mobileprovision file onto the iTunes 7.7 icon in the dock or copy the file to 'home/Library/MobileDevice/Provisioning Profiles'. If the directory does not exist you will need to create it.





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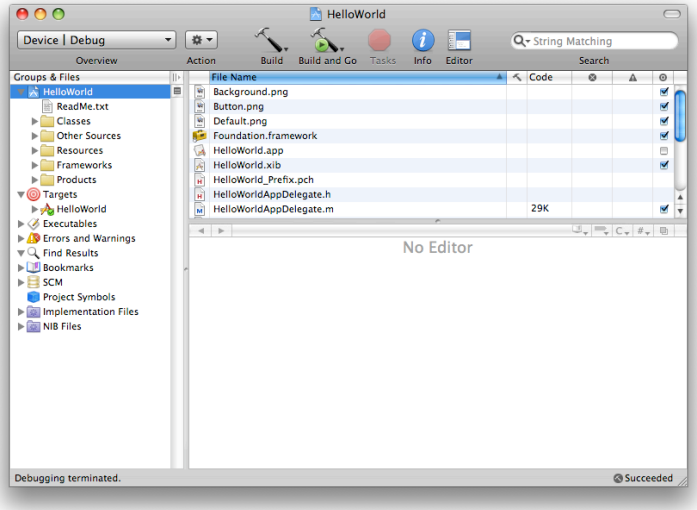
Running your Development Application on a Provisioned Device

Now that you have an approved iPhone Development Certificate, an assigned Apple device and a properly installed Development Provisioning Profile, Xcode can now build your application and install it on your development device. If you have a single iPhone Development Certificate and iPhone Development Provisioning Profile, you don't need to change any settings in Xcode to start running your applications. Step-by-step instructions are:

1. Launch Xcode and open your project.



2. Highlight the top-level of your project and select the 'Info' icon from the top menu bar.
3. In the Project Info window, select the 'Build' tab and enter "iPhone Developer: YourFirstName YourLastName in the 'Code Signing Identity'->'Any iPhone OS' field setting. This is the also the Common Name of your iPhone Development Certificate.

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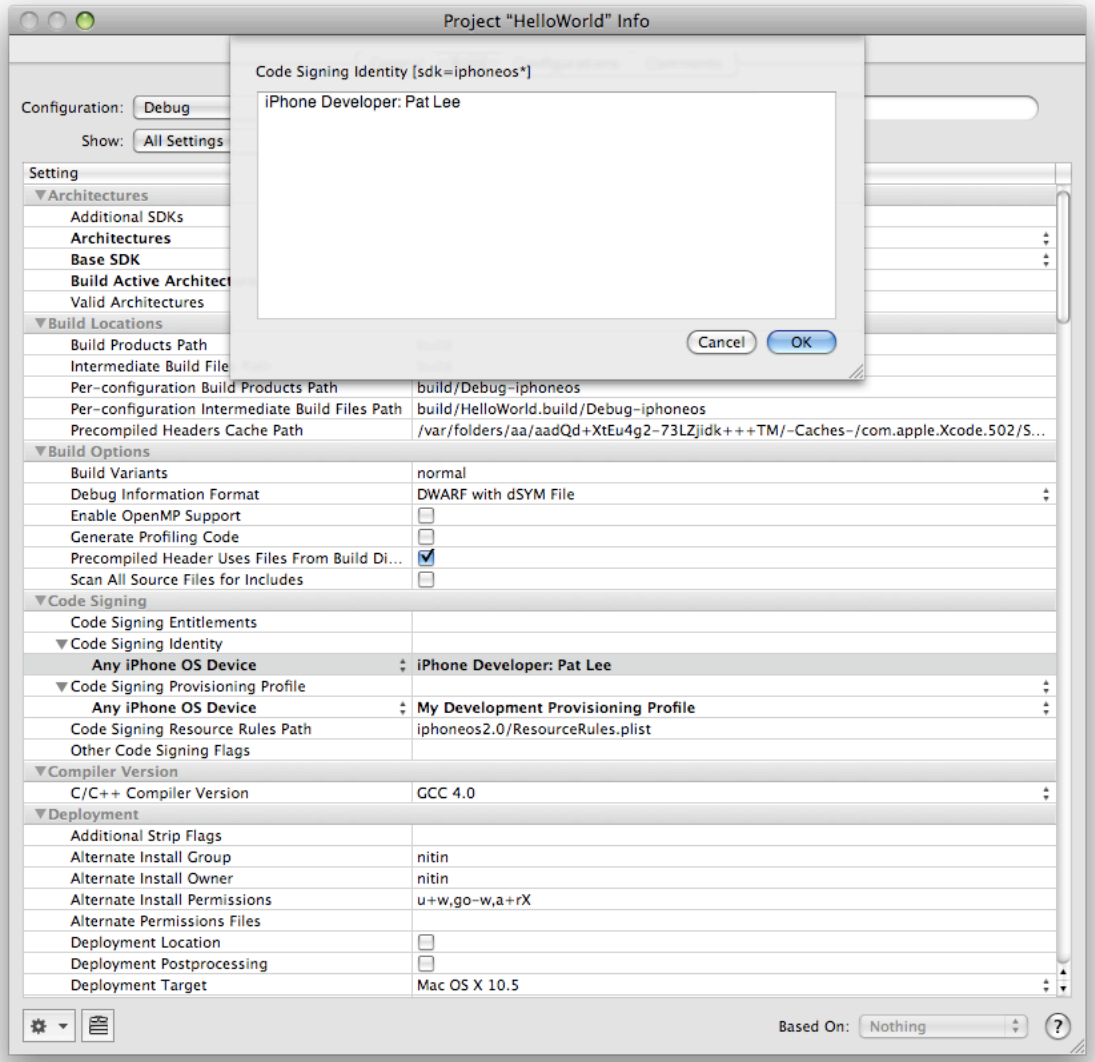

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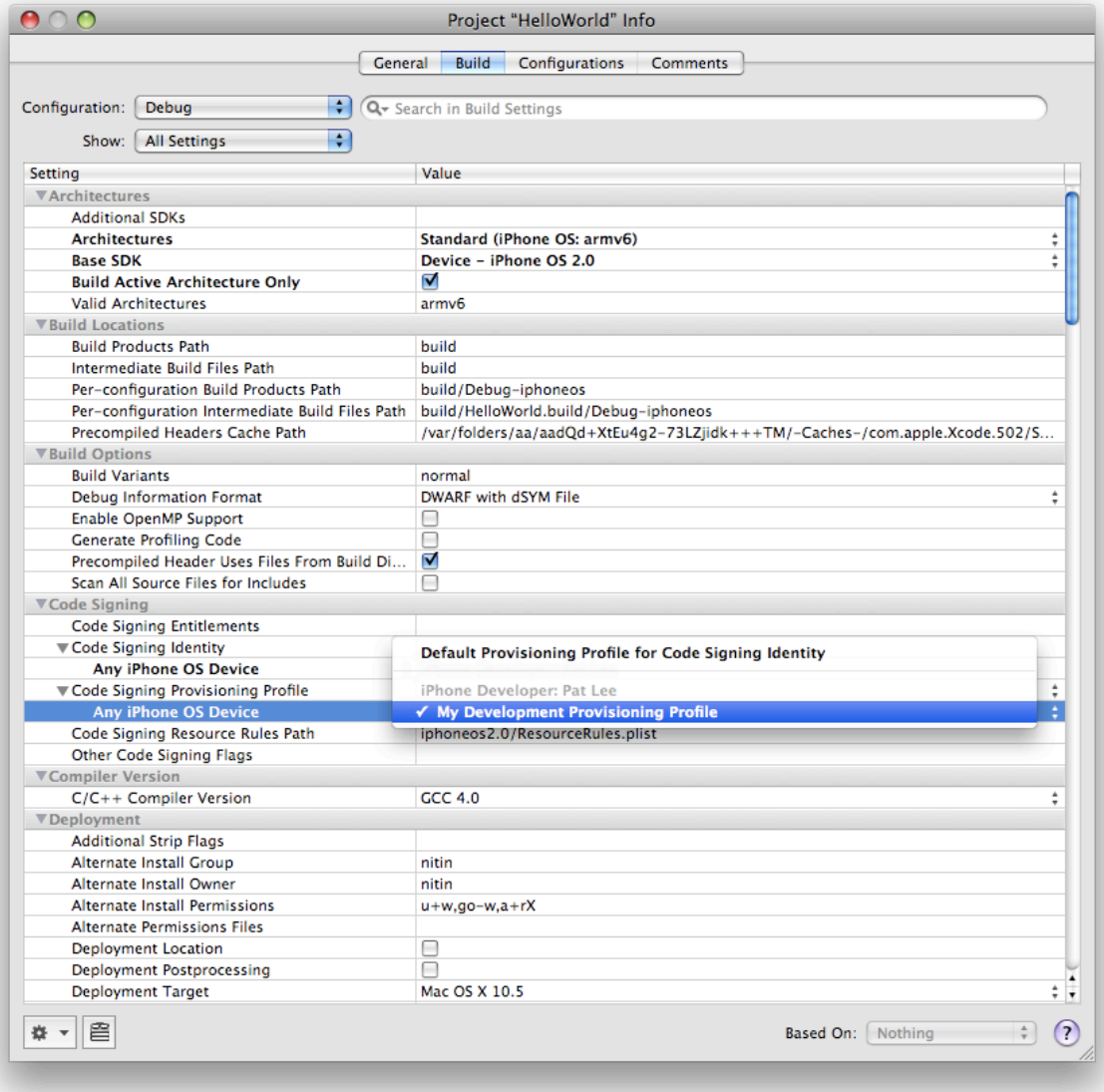
4. Select your Development Provisioning Profile from the 'Code Signing Provisioning Profile' setting.



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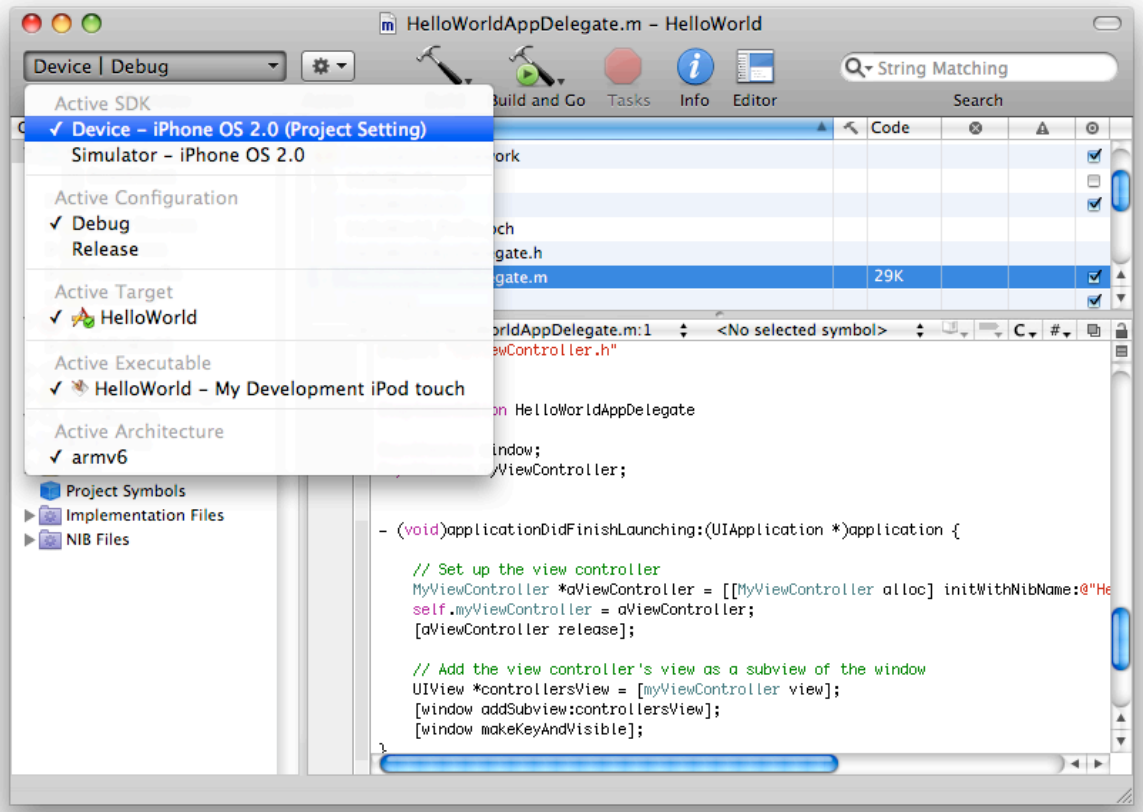
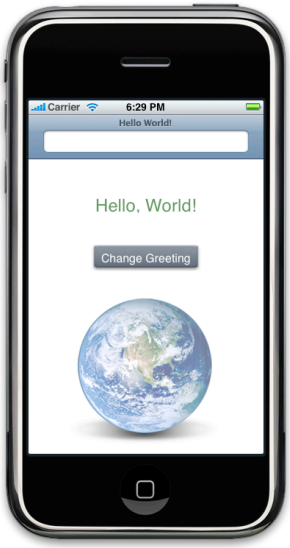
5. Back in the Project Window, select 'Device - iPhone OS 2.0 (Project Setting)' from the 'Device | Debug' drop down menu in the upper-left hand corner.



6. Click 'Build and Go' to install the application on your Apple device.



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Distribution

The distribution area of the iPhone Developer Program Portal is where you will prepare and learn how to submit your iPhone and/or iPod touch application for delivery via the App Store or for Ad Hoc distribution. Only Team Agents are authorized to prepare and submit applications for distribution. The iPhone Developer Program offers two ways for you to Distribute your application; either through the App Store, utilizing an iTunes Connect account created just for you, or through the Ad Hoc Distribution method.

Whichever method you choose, to distribute an application, Team Agents will need to complete the following:

- Create and Download an iPhone Distribution Certificate
- Create and Download a Distribution Provisioning Profile
- Build your final application in Xcode

Preparing your Application for Distribution

Prior to distributing your application, there are several steps you will need to complete.

Obtaining your iPhone Distribution Certificate

In order to distribute your OS X iPhone application, the Team Agent is required by Apple to create an iPhone Distribution Certificate. Only the Team Agent for your team will be able to create this certificate and only this certificate will enable application submission.

Generating a Certificate Signing Request

To request an iPhone Distribution Certificate, you first need to generate a Certificate Signing Request (CSR) utilizing the Keychain Access application in Mac OS X Leopard. The creation of a CSR will prompt Keychain Access to simultaneously generate your public and private key pair establishing your iPhone Distribution identity. Your private key is stored in the login Keychain by default and can be viewed in the Keychain Access application under the 'Keys' category. To generate a CSR:

1. In your Applications folder, open the Utilities folder and launch Keychain Access.
2. Choose Keychain Access -> Certificate Assistant -> Request a Certificate from a Certificate Authority. Note: If you have a private key highlighted in the Keychain during this process, the resulting Certificate Request will not be accepted by the Program Portal. Confirm that you are selecting "Request a Certificate From a Certificate Authority..." and not selecting "Request a Certificate From a Certificate Authority with <Private Key>..."

3. In the User Email Address field, enter your email address. Please ensure that the email address entered matches the information that was submitted when you registered as an iPhone Developer.

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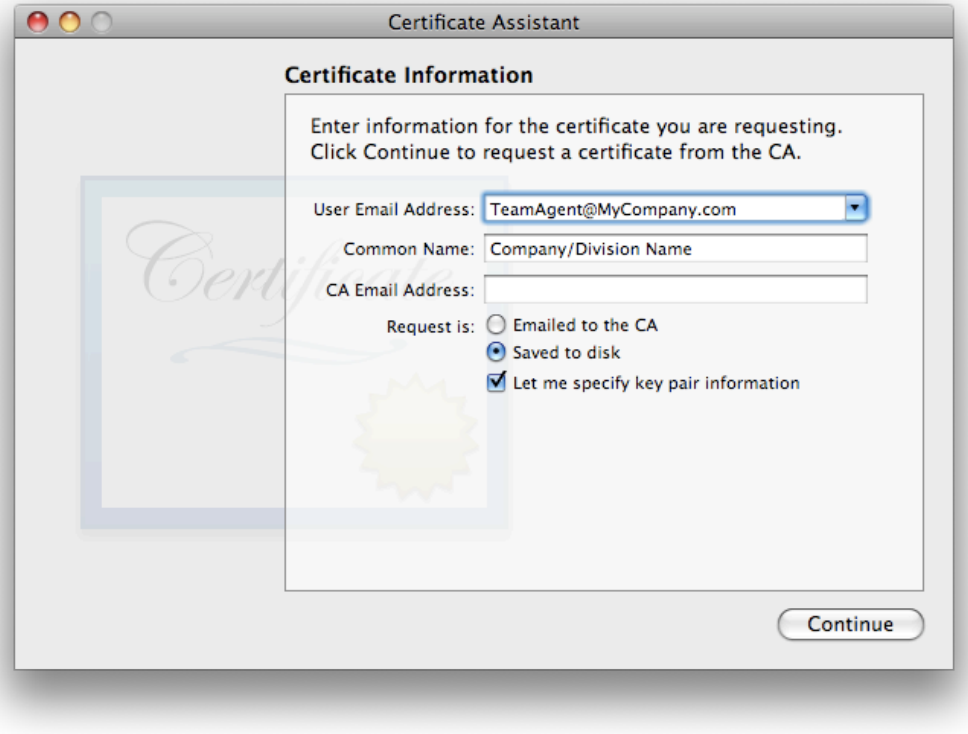
4. In the Common Name field enter your Company/Organization/Department name. Please ensure that the name entered matches the information that was submitted when you registered as an iPhone Developer.
5. No CA Email Address is required.
6. Select the 'Saved to Disk' radio button and if present, select 'Let me specify key pair information' and click 'Continue'.



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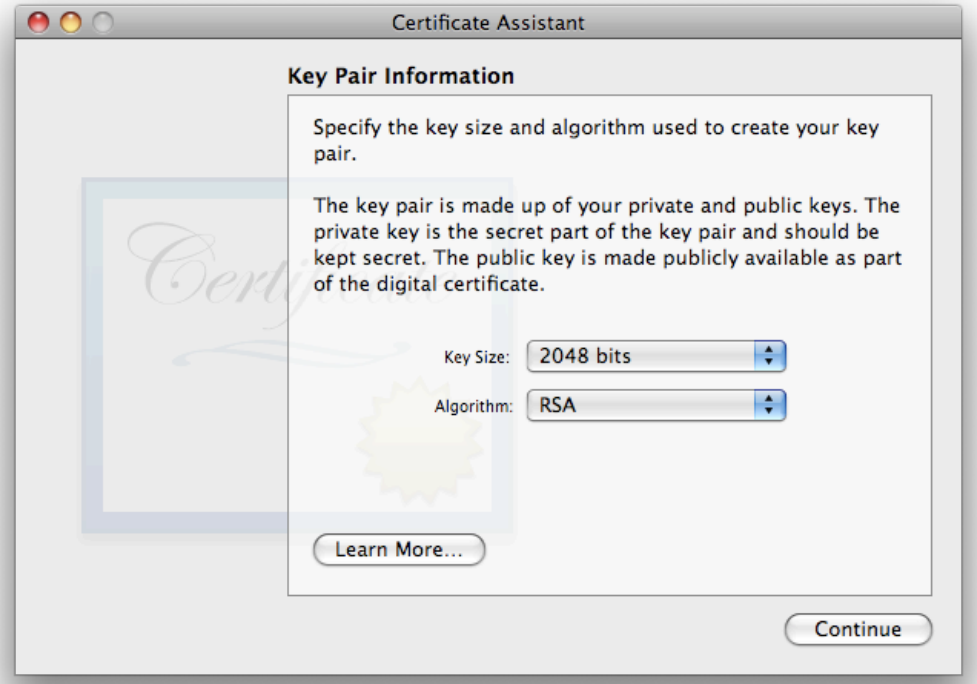
7. If 'Let me specify key pair' was selected, specify a file name and click 'Save'. In the following screen select '2048 bits' for the Key Size and 'RSA' for the Algorithm. Click 'Continue'.


Certificate Assistant
Key Pair Information
Specify the key size and algorithm used to create your key pair.
The key pair is made up of your private and public keys. The private key is the secret part of the key pair and should be kept secret. The public key is made publicly available as part of the digital certificate.
Key Size:
2048 bits
Algorithm:
RSA
Learn More...
Continue

8. The Certificate Assistant will create a CSR file on your desktop.

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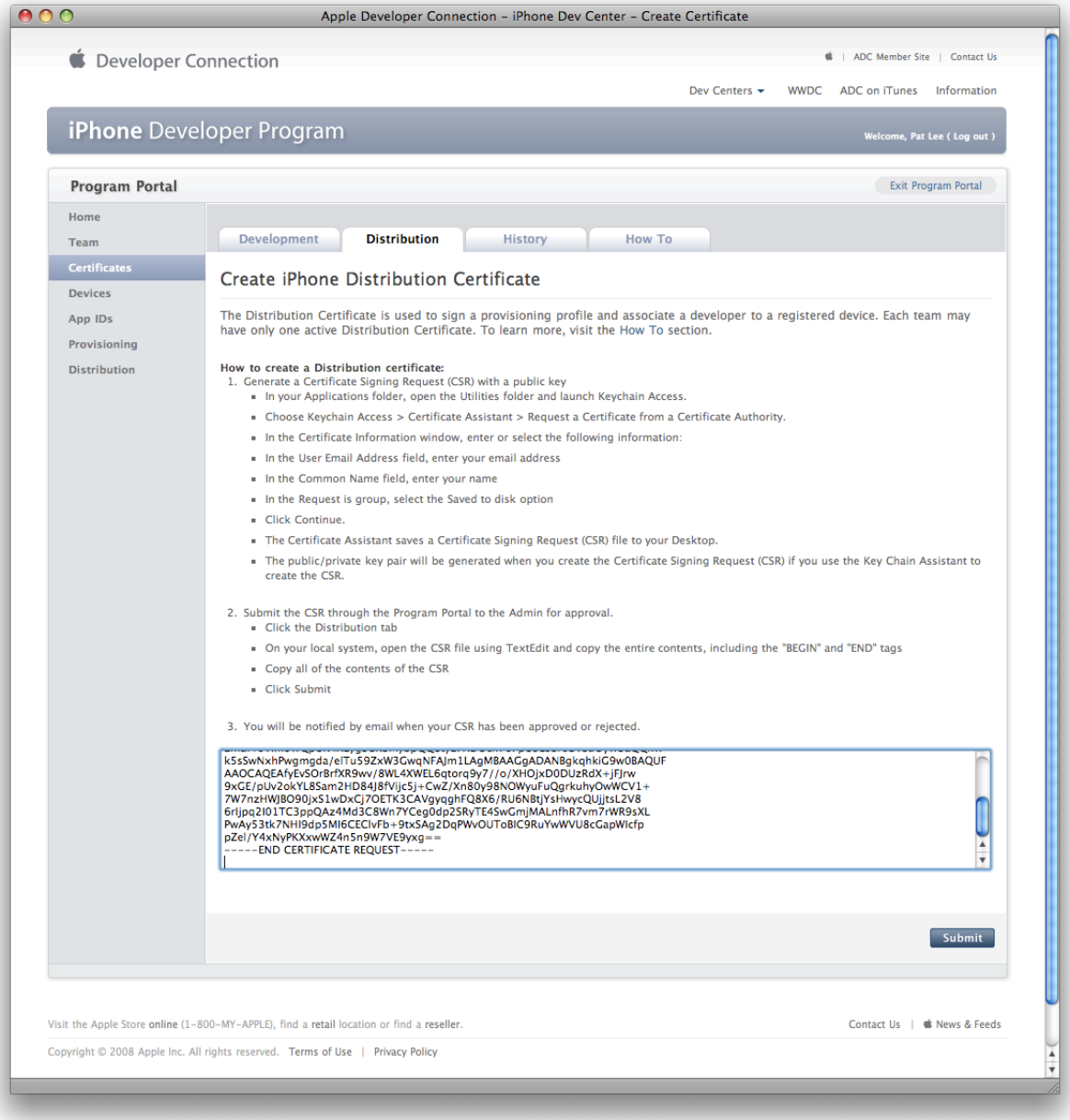
Submitting a Certificate Signing Request for Approval

1. After creating a CSR, log in to the iPhone Developer Program Portal and navigate to 'Certificates' -> 'Distribution' and click the 'Add Certificate' button.
2. On your local system, open the saved CSR file using a text editor and copy the entire contents, including the "BEGIN" and "END" tags.
3. Paste the entire contents of the CSR into the blank text field and click 'Submit'.
4. Approve your iPhone Distribution Certificate.


Apple Developer Connection – iPhone Dev Center – Create Certificate
Developer Connection
ADC Member Site | Contact Us
Dev Centers
WWDC
ADC on iTunes
Information
iPhone Developer Program
Welcome, Pat Lee (Log out)
Program Portal
Exit Program Portal
Home
Team
Certificates
Devices
App IDs
Provisioning
Distribution
Development
Distribution
History
How To
Create iPhone Distribution Certificate
The Distribution Certificate is used to sign a provisioning profile and associate a developer to a registered device. Each team may have only one active Distribution Certificate. To learn more, visit the How To section.
How to create a Distribution certificate:
1. Generate a Certificate Signing Request (CSR) with a public key
In your Applications folder, open the Utilities folder and launch Keychain Access.
Choose Keychain Access > Certificate Assistant > Request a Certificate from a Certificate Authority.
In the Certificate Information window, enter or select the following information:
In the User Email Address field, enter your email address
In the Common Name field, enter your name
In the Request is group, select the Saved to disk option
Click Continue.
The Certificate Assistant saves a Certificate Signing Request (CSR) file to your Desktop.
The public/private key pair will be generated when you create the Certificate Signing Request (CSR) if you use the Key Chain Assistant to create the CSR.
2. Submit the CSR through the Program Portal to the Admin for approval.
Click the Distribution tab
On your local system, open the CSR file using TextEdit and copy the entire contents, including the "BEGIN" and "END" tags
Copy all of the contents of the CSR
Click Submit
3. You will be notified by email when your CSR has been approved or rejected.
k5sSwNxhPwgmgda/elTu59ZxW3GwqNFAJm1LAgMBAAGgADANBgkqhkiG9w0BAQUF
AAOCAQEAfyEvSOr8rfXR9wv/8WL4XWEL6qtorq9y7//o/XHOjxD0DUzRdX+jFJrw
9xGE/pUv2okYL8Sam2HD84J8fVijc5j+CwZ/Xn80y98NOWyuFuQgrkuhyOwWCV1+
7W7nzHWJBO90jxS1wDxCj7OETK3CAVgyqghFQ8X6/RU6NBtJYsHwycQUjjtsL2V8
6rIjpq2I01TC3ppQAz4Md3C8Wn7YCeg0dp2SRyTE4SwGmjMALnfhR7vm7rWR9sXL
PwAy53tk7NHI9dp5MI6CECIvFb+9txSAg2DqPWvOUToBIC9RuYwWVU8cGapWIcfp
pZel/Y4xNyPKXxwWZ4n5n9W7VE9yxg==
-----END CERTIFICATE REQUEST-----
Submit
Visit the Apple Store online (1-800-MY-APPLE), find a retail location or find a reseller.
Contact Us | News & Feeds
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Downloading and Installing iPhone Distribution Certificates

1. In the 'Certificates'-->'Distribution' section of the Portal, Control-Click the WWDR Intermediate Certificate link and select "Saved Linked File to Downloads" to initiate download of the certificate. After downloading, double-click the certificate to launch Keychain Access and install.
2. In the same area of the Program Portal, click on the name of the iPhone Distribution Certificate to download.
3. On your local machine, double-click the downloaded .cer file to launch Keychain Access and install your certificate.

Saving your Private Key and Transferring to Other Systems

It is critical that you save your private key somewhere safe in the event that you need to build your application on multiple Macs or decide to reinstall your system OS. Without your private key, you cannot sign binaries in Xcode and there you will be unable to upload your application to the App Store or install your application on any Apple device. When a CSR is generated, the Keychain Access application creates a private key on your login keychain. This private key is tied to your user account and cannot be reproduced if lost due to an OS reinstall. If you plan to do development and testing work on multiple systems, you will need to import your private key onto all of the systems you'll be doing work on.

1. To export your private key and certificate for safe-keeping, open up the Keychain Access Application and select the "Keys" category.
2. Highlight the private key associated with your iPhone Distribution Certificate and select "Export Items" from the 'File' menu. Save your key in the Personal Information Exchange (.p12) file format.
3. You will be prompted to create a password which will be used when you attempt to import this key on another computer.
4. You can now transfer this .p12 file between systems. Double-click on the .p12 to install on a system. You will be prompted for the password you first entered above.

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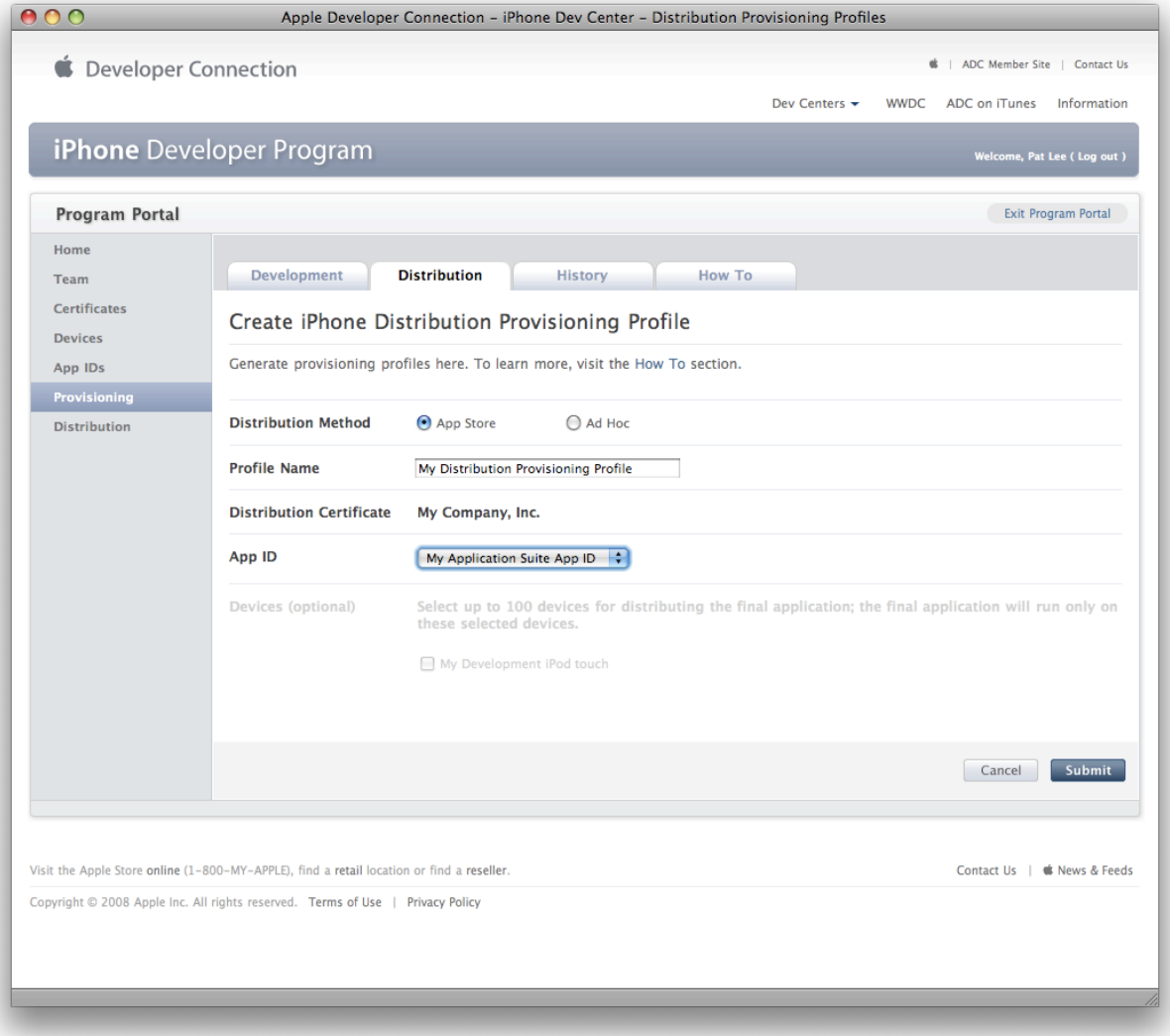
Creating and Downloading a Distribution Provisioning Profile for App Store Distribution

To successfully build your application with Xcode for distribution via the App Store, you first need to create and download an App Store Distribution Provisioning Profile. These are different than the Development Provisioning Profiles that were used earlier in that Apple will only accept applications if they are built with an App Store Distribution Provisioning Profile.

Note: App Store provisioning profiles do not allow for a distribution built application to be installed on an Apple device. To install your distribution ready application on a device, you must create an Ad Hoc provisioning profile.

1. Team Agents should navigate to the 'Provisioning' section of the Program Portal and select the 'Distribution' tab and click 'Add Profile'.
2. Select the App Store radio button.
3. Enter the name for your Distribution Provisioning Profile.
4. Confirm your iPhone Distribution Certificate has been created and is displayed.
5. Select your wildcard App ID to build all of your applications with your single Distribution Provisioning Profile.
6. Click 'Submit'.
7. Click on the name of the Distribution Provisioning Profile to download the .mobileprovision file.
8. Drag the .mobileprovision onto the Xcode or iTunes 7.7 icon in the dock to install.



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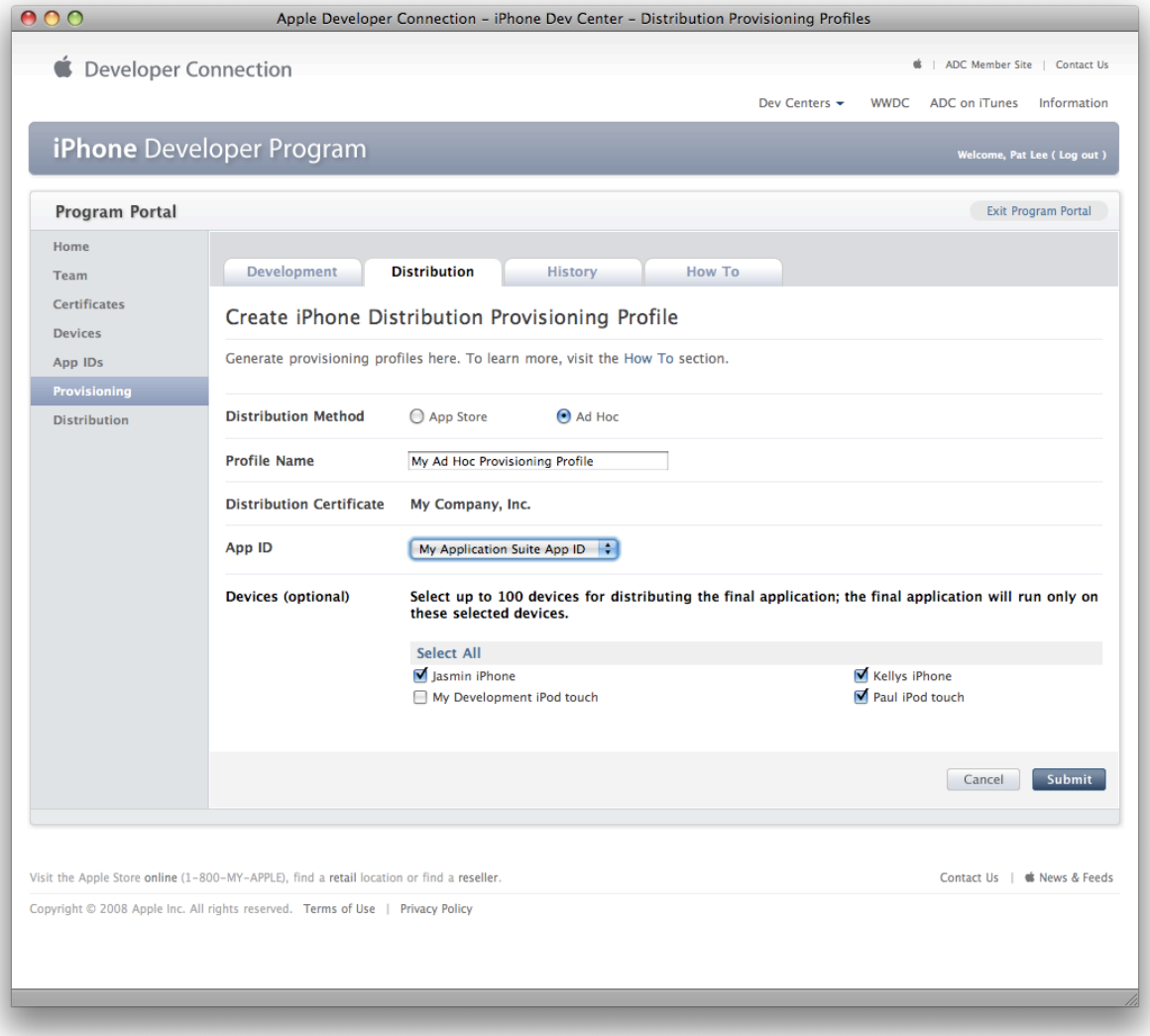
Creating and Downloading a Distribution Provisioning Profile for Ad Hoc Distribution

To successfully build your application in Xcode for Ad Hoc release, you will need to create and download an Ad Hoc Distribution Provisioning Profile.

1. Team Agents should navigate to the 'Provisioning' section of the Program Portal.
2. Select the 'Ad Hoc' radio button.
3. Enter the name for your Ad Hoc Distribution Provisioning Profile.
4. Confirm your iPhone Distribution Certificate has been created and is displayed.
5. Select the wildcard App ID to build all of your applications with the Distribution Provisioning Profile.
6. Select up to 100 UDIDs which you wish to run your application on.
7. Click 'Submit'.
8. Click on the name of the Distribution Provisioning Profile to download the .mobileprovision file.
9. Drag the .mobileprovision onto the Xcode or iTunes 7.7 icon in the dock to install.



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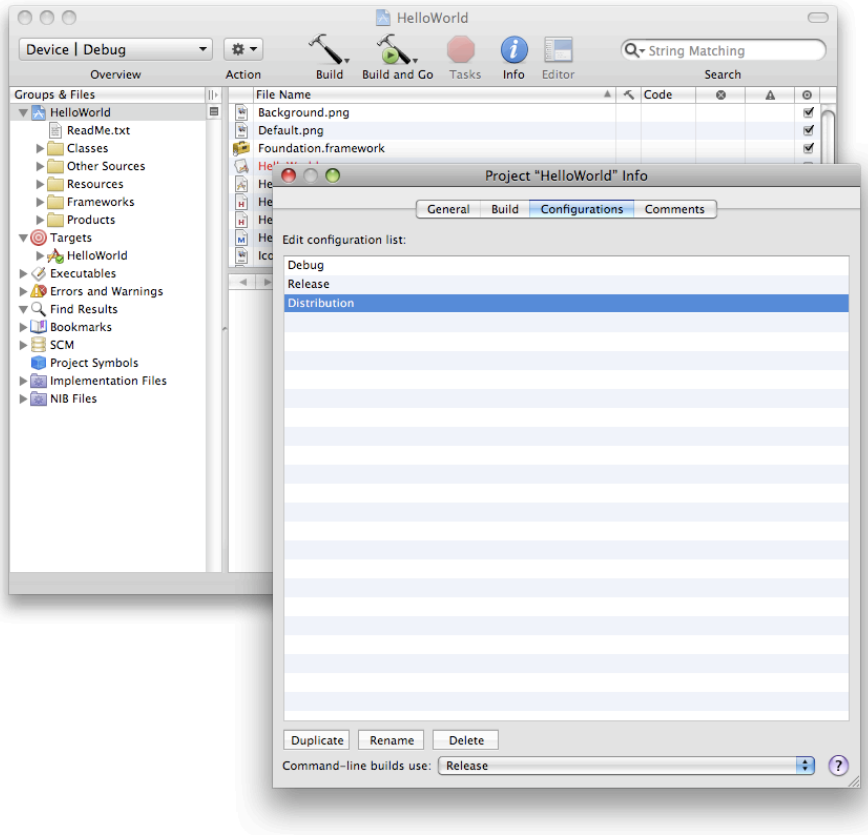
Building your Application with Xcode for Distribution

1. Launch Xcode and open your project.
2. If not already completed, drag the Distribution Provisioning Profile downloaded from the Program Portal onto the Xcode or iTunes 7.7 icon in the dock (or, drag into 'home/Library/MobileDevice/Provisioning Profiles' directory.)
3. Open the Xcode project and Duplicate the "Release" configuration in the Configurations pane of the project's Info panel. Rename this new configuration "Distribution".



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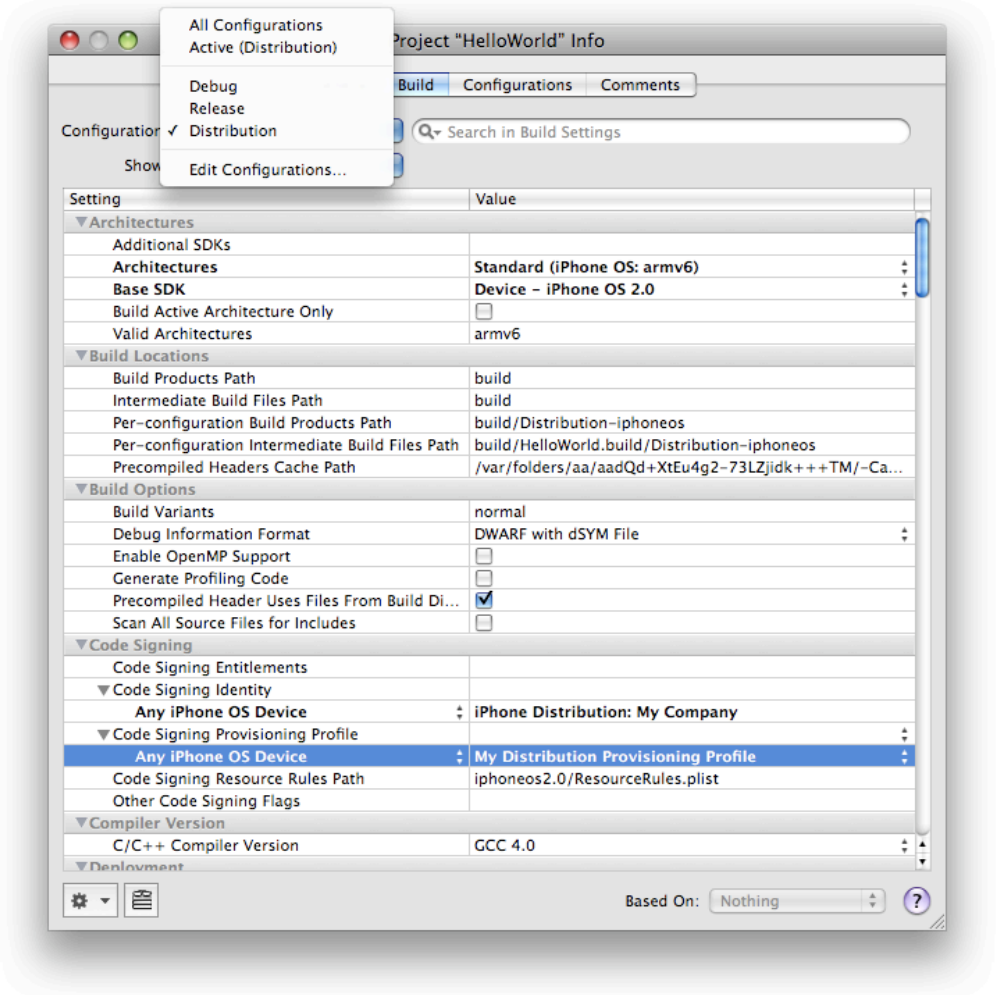
4. In both the Top Level Project Info window and the Target Info window, select the 'Build' tab and set the 'Configuration' to 'Distribution'



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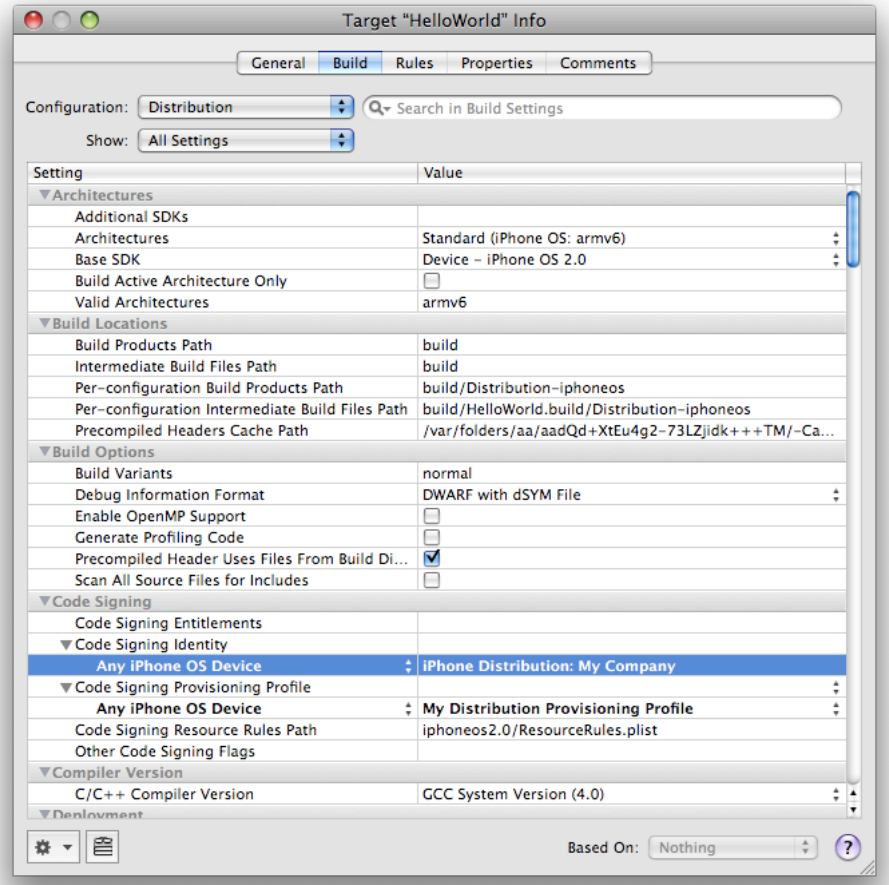
5. In both the Top Level Project Info window and the Target Info window change the Code Signing Identity setting from "iPhone Developer" to "iPhone Distribution: *YourCompanyName*". This will be the exact string in the Common Name field of your iPhone Distribution Certificate.



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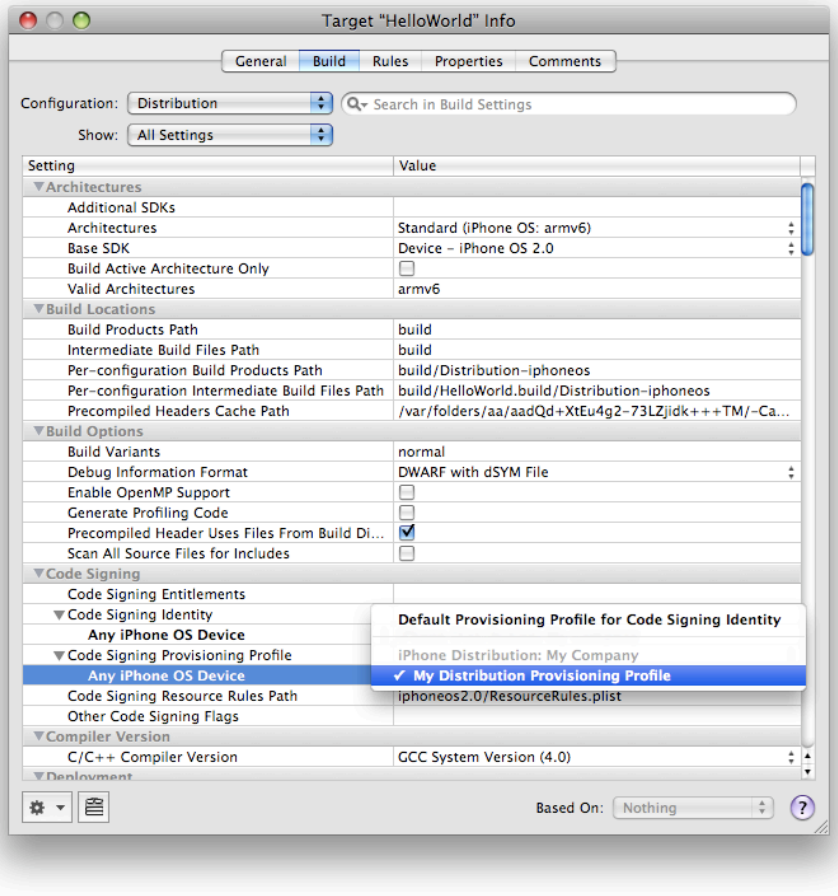
6. In both the Top Level Project Info window and the Target Info window change the Code Signing Provisioning Profile setting to the desired Distribution Provisioning Profile. If no Distribution Provisioning Profile is selectable, make sure your Configuration is set to Distribution, your Active SDK is set to Device iPhone OS 2.0 and your Distribution Provisioning Profile is installed in ~/Library/MobileDevice/Provisioning Profile. Relaunch Xcode and resume.



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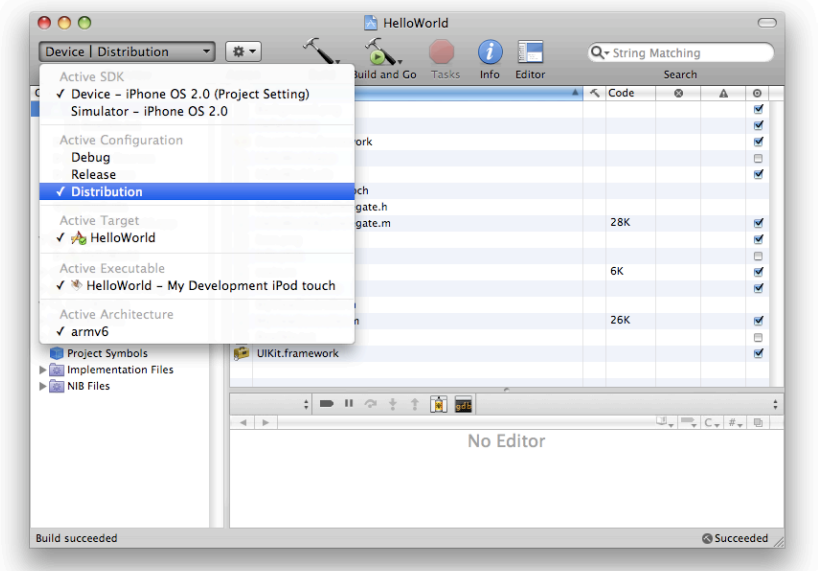
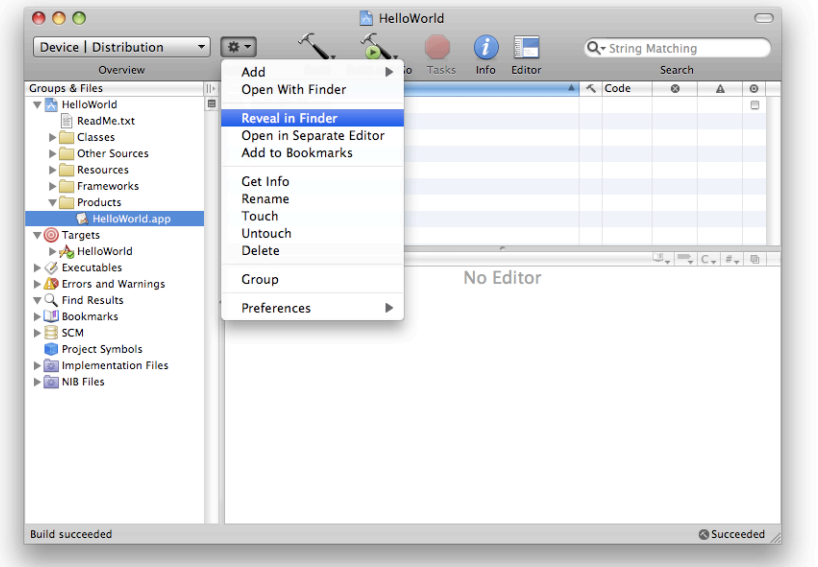
7. In the project window, select the Distribution Active Configuration from the overview popup and set the Active SDK to Device - iPhone OS 2.0.



8. Click 'Build'. (Note: Your binary must contain a flattened, square-image icon that is 57x57 pixels. This icon is displayed on the iPhone or iPod touch home screen.)
9. Highlight the app located within the "Products" sub-folder and select 'Reveal in Finder' from the Action popup.



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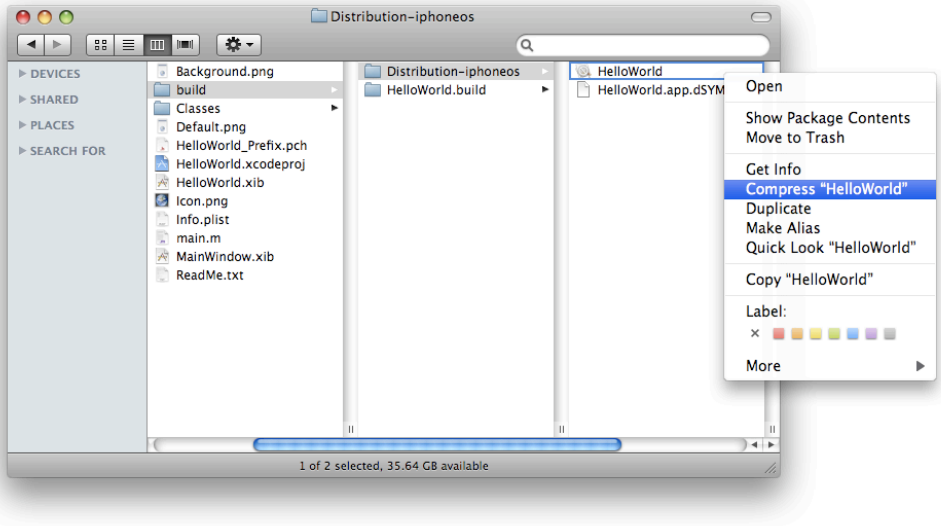
10. To verify your application was built successfully, Control-Click on the application bundle in Finder and select 'Show Package Contents'. Ensure a CodeSignature folder and an embedded.mobileprovision file exist in the package. If these files are not present, Clean all Xcode builds, relaunch Xcode and return to Step 1.
11. Use the compress option in Finder to create a .zip file containing your application



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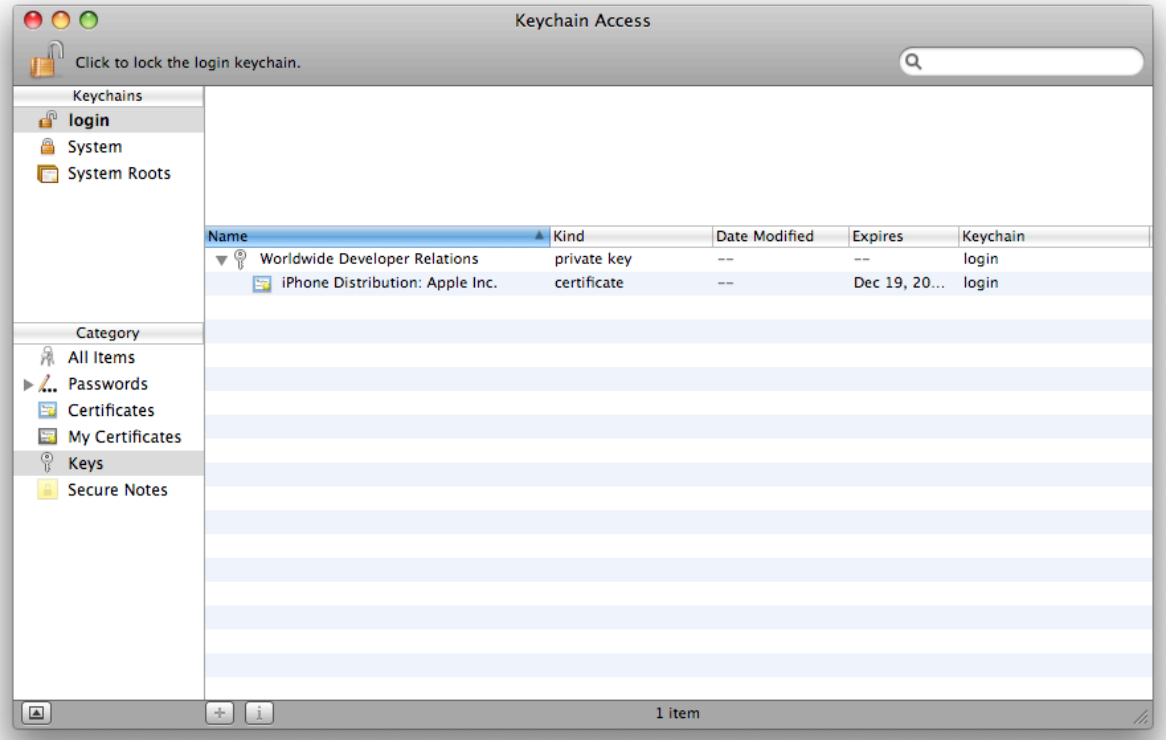
Building Multiple Apps for Distribution and Validating Your Distribution Builds

If you wish to build and distribute multiple applications, it is necessary that you create a wildcard App ID in the Program Portal with only an asterisk in the Bundle Identifier field. This wildcard App ID must be included in a single Distribution Provisioning Profile that will be used to build all of your applications.

All Distribution Methods

1. Delete any existing Distribution Provisioning Profiles from your Mac in ~/Library/MobileDevice/Provisions and ~/Library/MobileDevice/Provisioning Profiles and close Xcode.
2. Create a wildcard App ID in the iPhone Developer Program Portal - Simply place an asterisk in the Bundle Identifier field of the App ID to create a wildcard App ID.
3. Create an iPhone Distribution Provisioning Profile in the Program Portal incorporating the wildcard App ID created above.
4. Drag your new iPhone Distribution Provisioning Profile onto the Xcode or iTunes 7.7 icon in your dock to install it.
5. Confirm that both the Private Key the corresponds to your iPhone Distribution Certificate AND the public iPhone Distribution Certificate are located in the Keys category of the Keychain application. The Private Key is housed on the system that originally created the certificate request for the iPhone Distribution Certificate.



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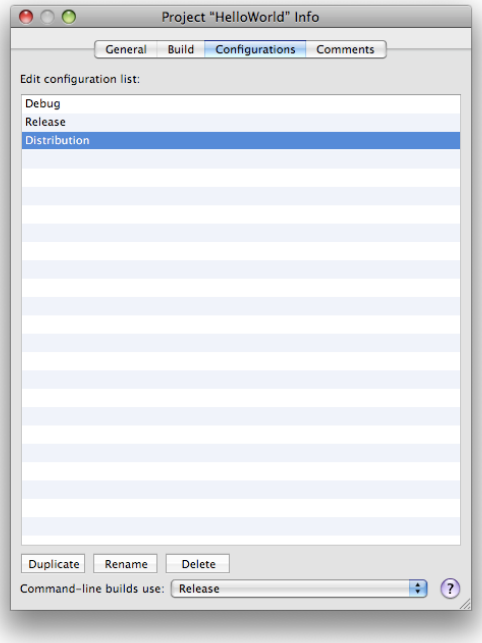
For each project, do the following once

1. In the Project Info window, duplicate the 'Release' configuration and title it 'Distribution'.



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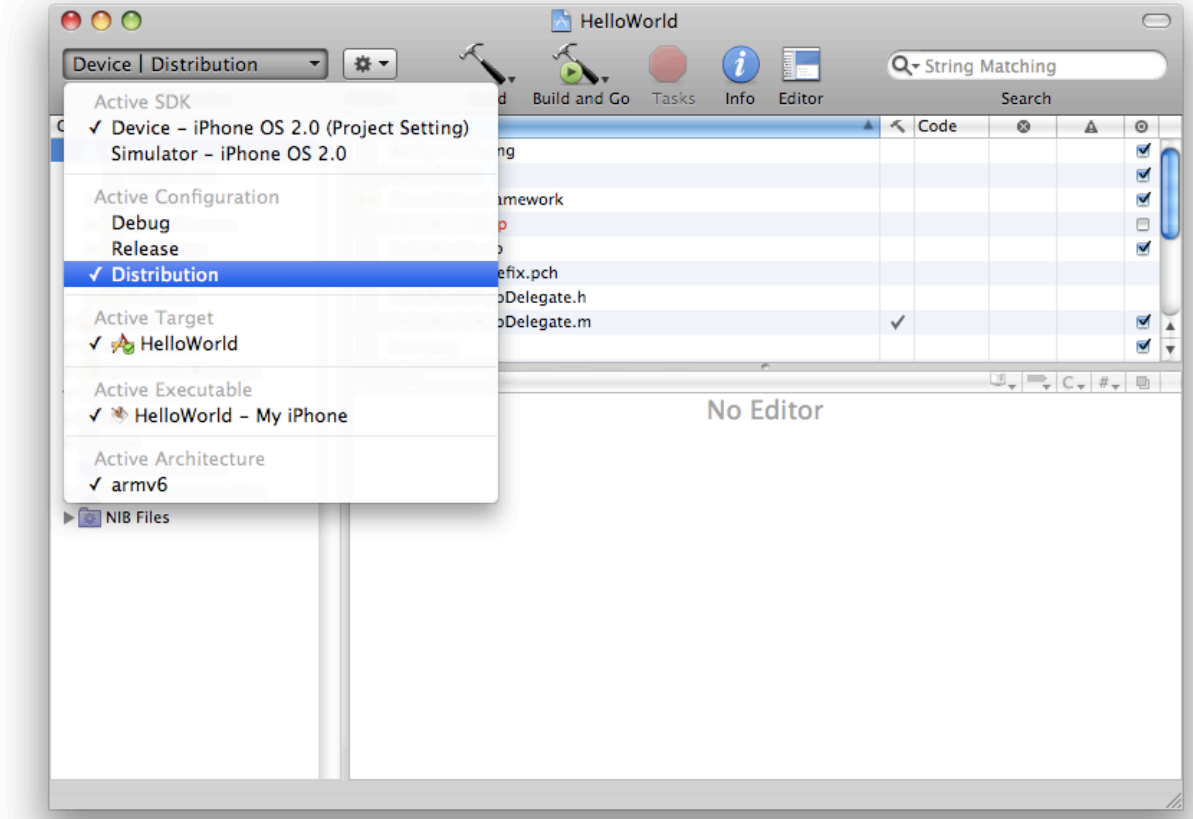
2. Set the Active SDK to 'Device and the Active Configuration to 'Distribution'



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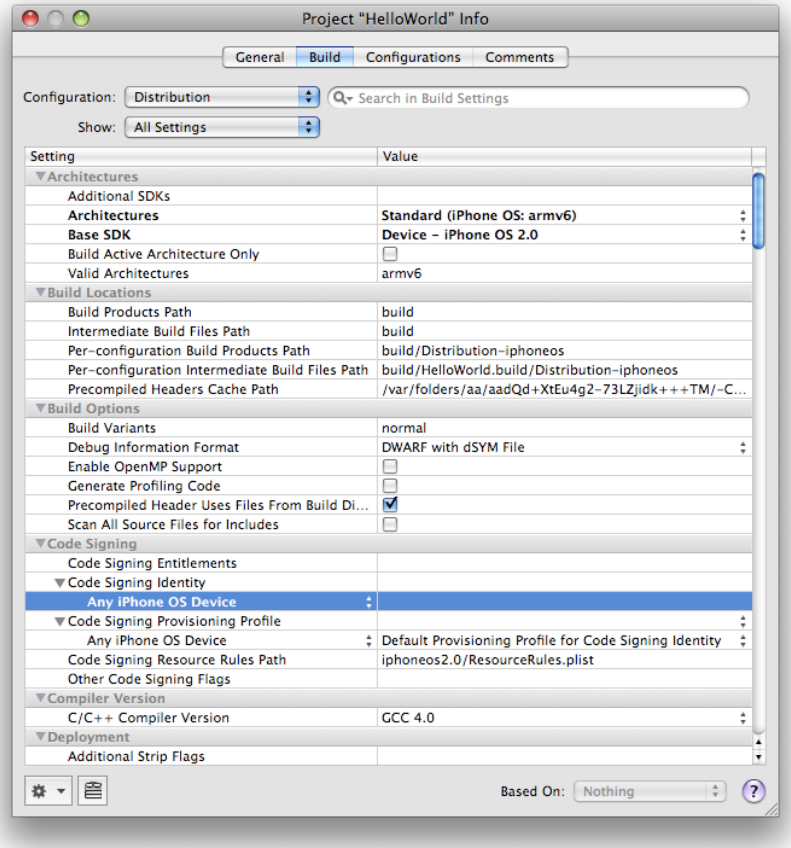
3. At the Project level, delete the code signing identity in the build pane and set the provisioning profile the the "default" setting. Ensure the Configuration in this window is set to Distribution.



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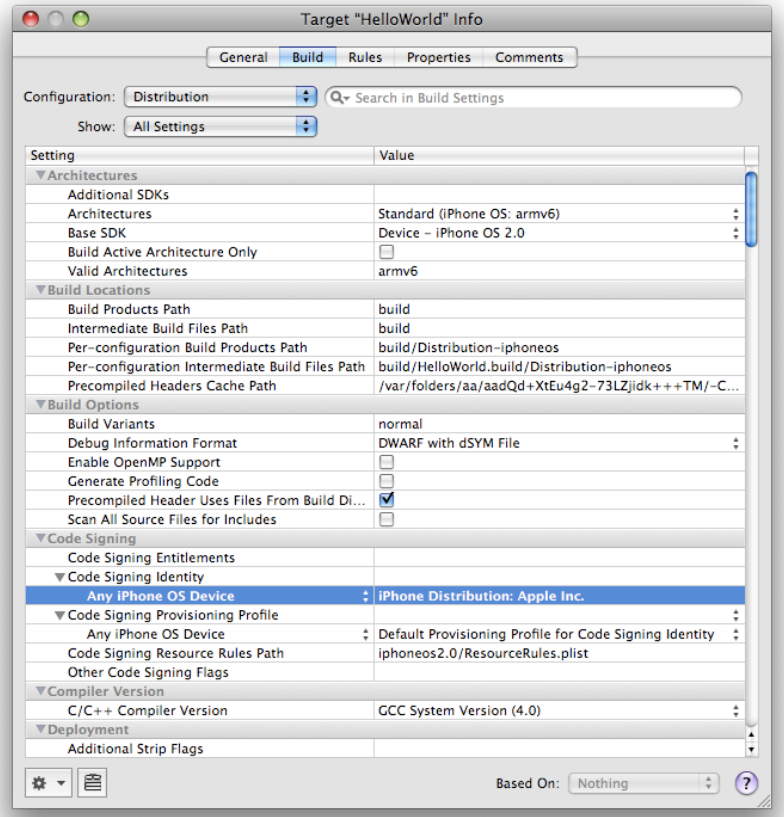
4. In the Build Settings Inspector at the Target level, enter the code signing identity: "iPhone Distribution: *COMPANYNAME*". This will be the exact same string as found in the common name of your iPhone Distribution Certificate. In the diagrams below, Apple Inc. is the example *COMPANYNAME*. Make sure the Configuration is set to Distribution in the Build Settings Inspector as well.



iPhone Distribution: Apple Inc.
iPhone Distribution: Apple Inc.
Issued by: Apple Worldwide Developer Relations Certification Authority
Expires: Friday, December 19, 2008 2:03:44 PM PT
This certificate is valid
Trust
Details

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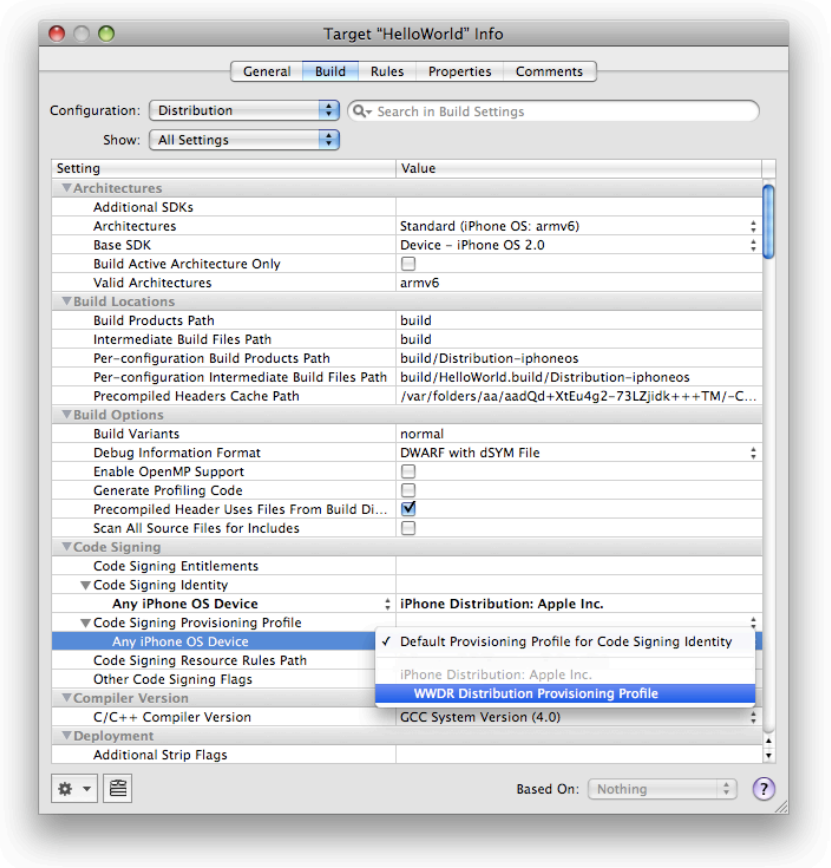
5. Select your iPhone Distribution Profile (which includes the wildcard App ID) from the Code Signing Provisioning Profile drop down menu.



After setting all the projects up correctly with the Code Signing Identity and Provisioning Profile set only at the target level, do the following each time you build to ensure a successful build process.

1. Open the Project.
2. Select the Target and open the Build Settings Inspector. Confirm you are in the Distribution Configuration.
3. Delete the Code Signing Identity: iPhone Distribution: *COMPANYNAME*
4. In the Xcode Build Menu, select Clean all Targets.
5. Re-enter the code-signing identity iPhone Distribution: *COMPANYNAME* in the Target Build Settings Inspector.
6. Build your Project.
7. Open the Build Log detail view.
8. Search and Confirm the presence of the word "embedded" - this will take you to the line in the build log that shows the provisioning profile was successfully called.

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9. Confirm that the destination path (at the very end of the build message) is the app you are building. For example:
   ProcessingProductPackaging "/Volumes/Data/user/Library/MobileDevice/Provisioning Profiles/My_Distribution_Provisioning_Profile.mobileprovision" /Volumes/Data/user/projects/Distribution-iphoneos/HelloWorld.app/embedded.mobileprovision cd /Volumes/Data/user/projects/HelloWorld <com.apple.compilers.product-pkg-utility> "/Volumes/Data/user/Library/MobileDevice/Provisioning Profiles/972DCBC8-5FB7-4970-B079-6A9141738355.mobileprovision" -o /Volumes/Data/user/projects/Distribution-iphoneos/**HelloWorld.app/embedded.mobileprovision**

10. Search for the term "CodeSign" - this will take you to the line in the build log that confirms your application was signed by your iPhone Distribution Certificate.
11. For Ad Hoc distribution, share your App bundles and iPhone Distribution Provisioning Profile with the owners of the devices specified in the provisioning profile. Recipients of the .app and .mobileprovision files can drag them onto iTunes 7.7 and sync their devices to install.

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Submitting your application via iTunes Connect

iTunes Connect is a suite of web-based tools created for developers to submit and manage their applications for sale via the App Store. In iTunes Connect you will be able to check the status of your contract, manage users, submit your binary, metadata, and assets.

Team Agents will find a link to iTunes Connect in the 'Distribution' section of the Program Portal. Clicking this link will take you directly to the login page of iTunes Connect. Enter the same AppleID and password you use to log in to the iPhone Developer Program Portal to access iTunes Connect.

Prior to uploading your application to iTunes Connect, you will be asked to review iTunes Distribution Terms & Conditions as well as gather metadata pertinent to your application.

Distribution Terms & Conditions

Before beginning the application submission process, it is critical that you read and review the distribution Terms and Conditions. If your company has a legal department, it is recommended that you provide this document to them for review. If you plan to sell your application, you need to have your paid commercial agreement in place, so that it can be posted to the App Store. If not, your application will not be posted to the App Store until your commercial agreement is signed. If your application is free, you've already entered into the freeware distribution agreement by being accepted into the iPhone Developer Program.

Gathering your Application Metadata

Prior to submitting your application, it will be helpful for you to collect all the information about your application that will be displayed on the App Store. Some data that you will want to gather are:

- Application Name (Must conform to guidelines for using Apple trademarks and copyrights)
- Application Description (up to 4000 characters)
- Device type(s) the Application can be run on (iPhone and/or iPod touch)
- Unique Stock Keeping Unit (SKU) for each major version of your application
- Primary Category
- Secondary Category (Optional)
- Game Rating (Optional)
- Unique Version #
- Application copyright holder
- Support URL for the Company
- Support Email Address (for use by Apple only)
- End User License Agreement (Optional) If a EULA is not provided, standard iTunes App Store EULA will be applied.
- Territories application to be distributed in
- Application Availability Date
- Application Price
- Localization desired (English, Dutch, French, German, Italian, Spanish, Japanese)

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Preparing your Application Artwork

You have the ability to provide several pieces of artwork that will be visible to customers visiting the App Store. Some of the assets you may wish to submit with your application are:

- **iPhone/iPod touch Home Screen Icon** - Your application binary must contain a flattened, square-image icon that is 57x57 pixels. This icon is what will be displayed on the iPod touch or iPhone home screen.

- **Large Application Icon** - This will be used to feature your application on the App Storefront. To be featured prominently on the App Store we recommend you provide an attractive, original icon that meets the following requirements:
  - 512 x 512 pixels (flattened, square image)
  - 72 DPI
  - .jpg, .jpeg, or .tiff format

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- **Primary Screenshot** - The primary screenshot will be used as the main screenshot visible on your application product page on the App Store, and the one that will also be displayed on the device. For best results, don't include the iPhone status bar in your screenshots and follow these requirements:
  - 320x460 portrait (without status bar) minimum
  - 480x300 landscape (without status bar) minimum
  - 320x480 portrait (full screen)

Uploading your Application

After completing the above steps, iTunes will present an upload mechanism for you to submit your .zip file to Apple.

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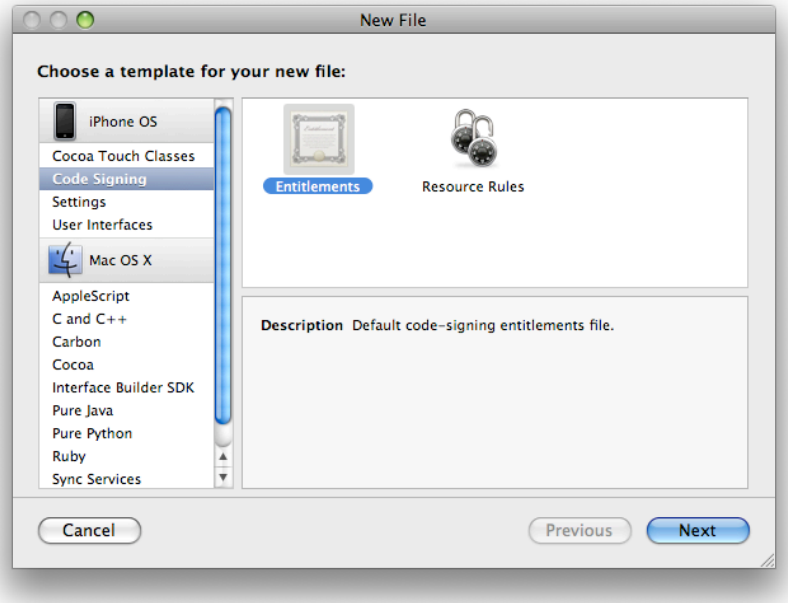
Distributing your application with Ad Hoc Distribution

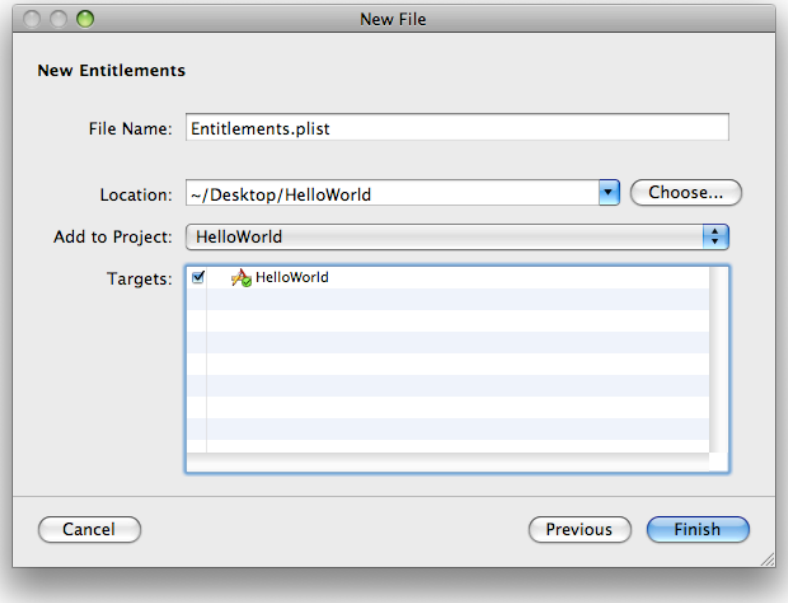
In addition to distributing applications through the App Store, iPhone Developers enrolled in the Standard program have the opportunity to distribute their application outside of the App Store on up to 100 different devices.

To distribute your application for Ad Hoc Distribution:

1. Create and Download an Ad-hoc Distribution Provisioning Profile in the 'Provisioning'->'Distribution' tab as described in the 'Creating and Downloading a Distribution Provisioning Profile for Ad-hoc Distribution' section above.
2. Open the project, and select File -> New File -> iPhone OS -> Code Signing -> Entitlements.



3. Name the file "Entitlements.plist". and click 'Finish'. This creates a copy of the default entitlements file within the project.



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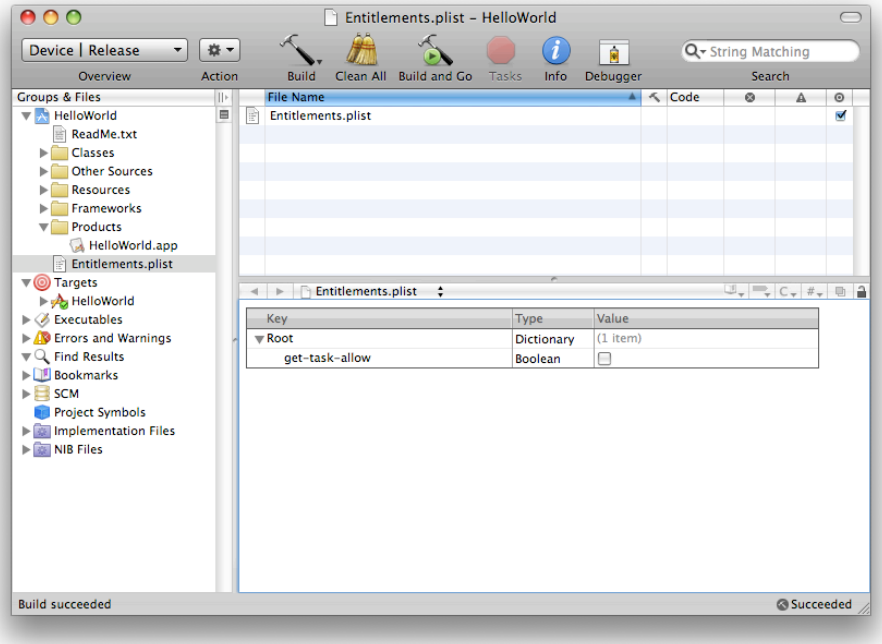
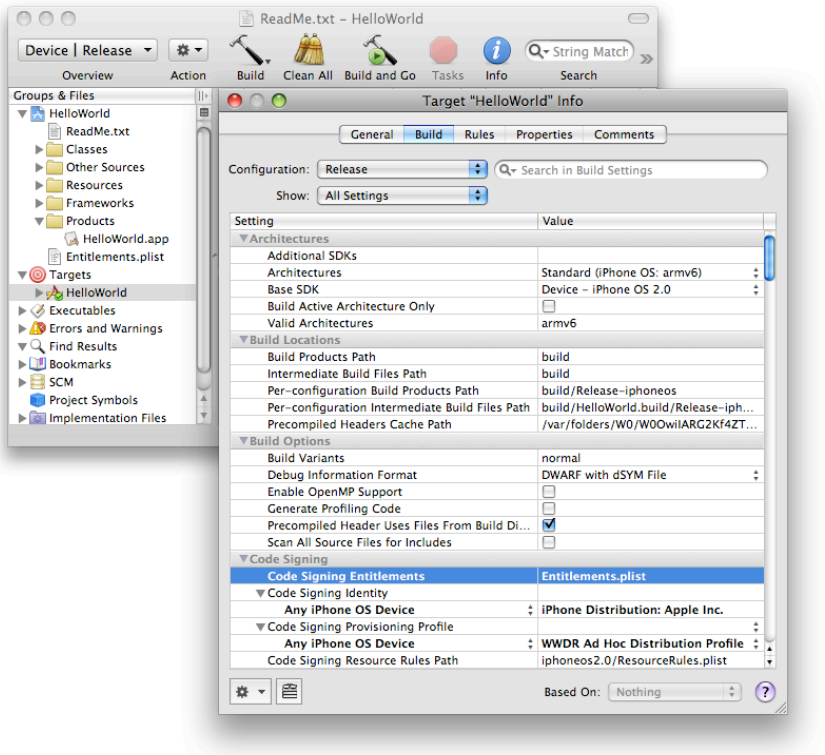
4. Select the new Entitlments.plist file and uncheck the "get-task-allow" property. Save the Entitlements.plist file.



5. Select the Target, and open the Build settings inspector. In the 'Code Signing Entitlements' build setting, type in the filename of the new Entitlements.plist file including the extension. There is no need to specify a path unless you have put the Entitlements.plist file somewhere other than the top level of the project.



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6. Build your application in Xcode using the build process described in the 'Building your Application with Xcode for Distribution' section.
7. To share your application, provide both the compiled application binary AND the Ad Hoc Distribution Provisioning profile to the owners of the devices specified in the Ad Hoc Distribution Provisioning Profile.
8. Recipients of the .app bundle and .mobileprovision file can drag both files onto the iTunes icon in the dock and sync their device to install. Both the application and the Ad Hoc Distribution Provisioning Profile will be installed on the device.
9. If you have multiple applications to build, make sure to relaunch Xcode each time you build a new application and refer to the Distributing Multiple Applications section above.

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Glossary

Below are a list of commonly used terms in the iPhone Developer Program:

App ID - A unique digital fingerprint that OS X iPhone uses to grant your application access to a portion of the Keychain and one part of a Development and Distribution Provisioning Profile.

Apple device - An iPhone or iPod touch

Development Team - A Development team is a either a single person enrolled in the Individual Program or a Team Agent and group of Team Admins and Team Members in the Standard Program.

iPhone - A combination mobile phone, multimedia player, and wireless Internet device from Apple Inc.

iPhone Development Certificate - An electronic document that associates a digital identity with other information, including a name, email address, or business. An iPhone Development Certificate is restricted to application development only and is valid for a limited amount of time.

iPhone Distribution Certificate - An electronic document that associates a digital identity with other information, including a name, email address, or business. An iPhone Distribution Certificate is restricted to application distribution only and is valid for a limited amount of time.

iPod touch - A portable multimedia player and wireless Internet device from Apple Inc.

iTunes Connect - A suite of web-based tools created for developers to submit and manage their applications for sale via the App Store.

OS X iPhone - OS X iPhone comprises the operating system and technologies that you use to run applications natively on iPhone and iPod touch devices. Although it shares a common heritage and many underlying technologies with Mac OS X, iPhone OS was designed to meet the needs of a mobile environment, where user's needs are slightly different.

Provisioning Profile - A set of entities and entitlements allowing applications to be installed and run on an Apple device.

Team Agent - The original person accepted into the iPhone Developer Program for all membership types. The Team Agent has access to all functionality in the iPhone Developer Program Portal and is the sole person capable of Distributing an application.

Team Admin - A person on an iPhone Development Team designated by the Team Agent or another Team Admin who has the capability to approve iPhone Development Certificate requests, invite Team Members, add Apple devices and create App IDs and Development Provisioning Profiles.

Team Member - A person on an iPhone Development Team who can request iPhone Development Certificates and install OS X iPhone applications on an Apple device.

Unique Device Identifier (UDID) - A 40 character string used to identify a specific Apple device.

Xcode - Apple's premiere development environment for Mac OS X and OS X iPhone and includes all the tools needed to create, debug, and optimize Mac OS X and OS X iPhone applications.

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